6. EXCAVATION RESULTS (William F. Stanyard)

Archaeological investigations at Neuse Levee began with its discovery in 1992 during a cultural resources survey conducted by the NCDOT (Maher 1992a, b). In 1993, NCDOT archaeologists returned to the site, and initiated a limited testing program to determine the nature and extent of the archaeological deposits (Glover 1993). Research at Neuse Levee culminated in the summer of 1998, when TRC conducted data recovery investigations under contract with the NCDOT. The results of the field investigations are the subject of this chapter. It includes summary data and artifacts recovered. More detailed data on specific artifact types are provided in subsequent chapters, which present the result of the various analytical studies.

According to the archaeological and radiocarbon evidence, Neuse Levee was initially occupied during the Late Archaic period at approximately 2200 B.C. The site was subsequently visited at least once during each of the Early, Middle, and Late Woodland periods.

PHYSICAL SETTING

The Neuse Levee site is situated on a paleo-levee along the northeast bank of the Neuse River (Figure 6.1; see Figure 2.1). Currently, the overstory vegetation consists of mature hardwoods; secondary vegetation includes poison ivy, nettles, and greenbrier (Figure 6.2).

A detailed description of the site's geomorphology and sediment regime is provided in Chapter 2. The levee consists of four lithologic units produced by alluvial and pedogenic processes that have been operating throughout the Holocene (see Figure 2.2). The units are numbered from the bottom up, and are distinguished from the archaeological strata, which are numbered from the top down. Lithologic Unit 1 (LU 1) consists of overbank sediments that began to accumulate on top of basal alluvial gravels at about 10,160 radiocarbon years ago; sediments continued to accumulate until at least 7,270 radiocarbon years B.P. (see Figure 2.2). A hiatus or reduction in sedimentation rates occurred between that date and 3,800 radiocarbon years ago, when the site was apparently occupied for the first time. Since LU 1 weathered into a very thick, well-developed Bt horizon prior to the initial prehistoric occupation, it is very likely that sedimentation rates slowed or ceased closer to the 7,270 date. The geomorphological evidence suggests that the surface of LU 1 may have been scoured immediately prior to the deposition of Lithologic Unit 2 (LU 2).

Lithologic Unit 2 (LU 2) is a Bw horizon that was deposited when sedimentation rates once again outpaced erosional processes. According to the radiometric evidence, LU 2 was created between approximately 3,800 and 1,960 radiocarbon years ago. The terminal date, which was obtained from wood charcoal taken from the downslope edge of LU 2 at its interface with LU 3 (see Figure 2.2), is generally supported by the archaeological evidence. The majority of Woodland diagnostics (post-2500 B.P.) were encountered in Lithologic Units 3 and 4.

Lithologic Unit 3 is slackwater alluvium deposited between ca. 1,960 and 170 radiocarbon years ago, and LU 4 is comprised of historical sediments that have accrued over the last two centuries (see Figure 2.2). Although very thick alluvial deposits occur between the edge of the levee crest and the Neuse River, these sediments are relatively shallow on the levee crest itself, and they have been weathered into an A/Ab horizon that is a maximum of 30 cm thick in that area. The confinement of the Woodland materials within a single soil horizon (A/Ab) attests to the decrease in sedimentation on the crest of the levee that, according to the geomorphological evidence, occurred sometime after 1,960 radiocarbon years ago.

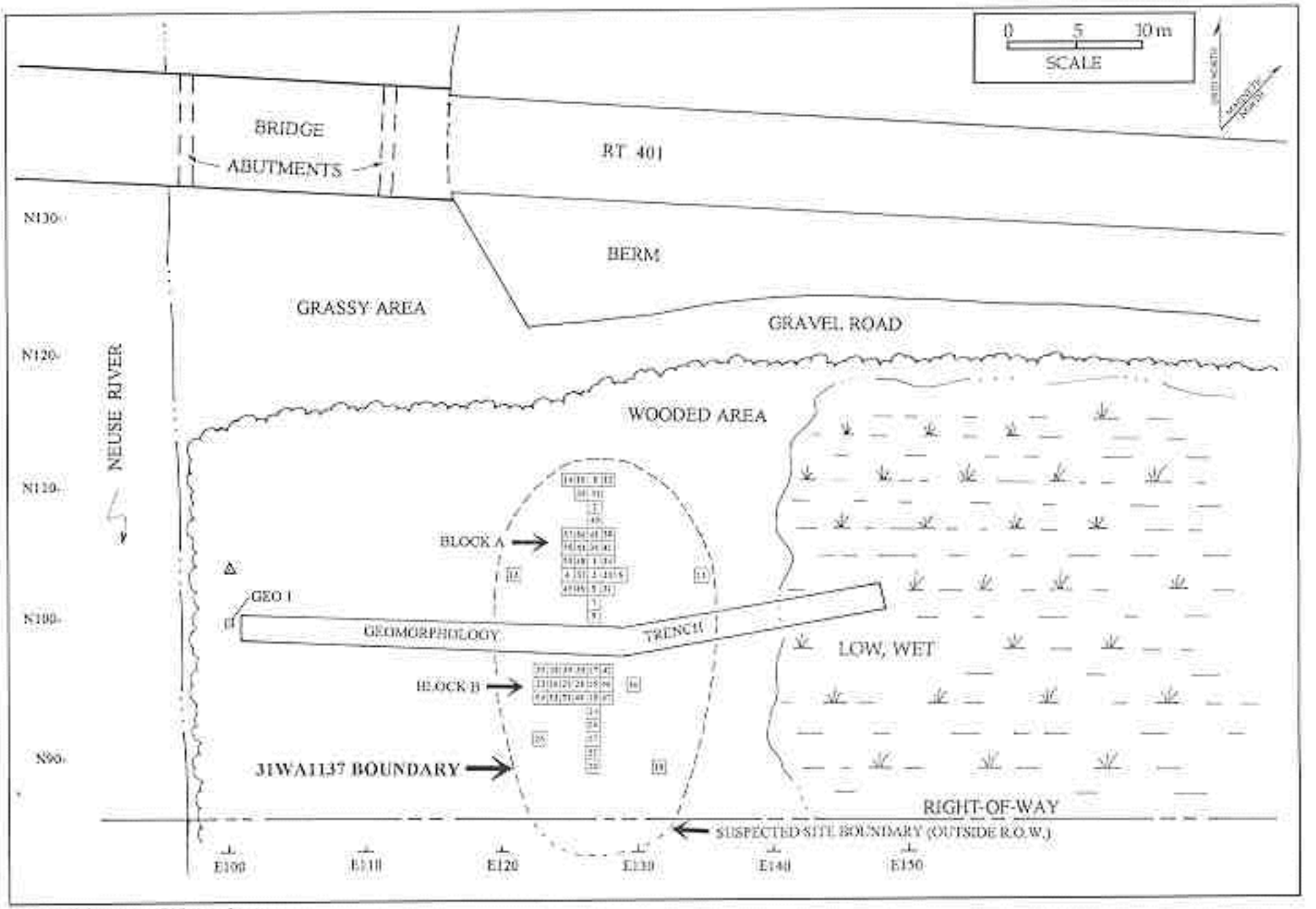


Figure 6.1. Map of Neuse Levee.

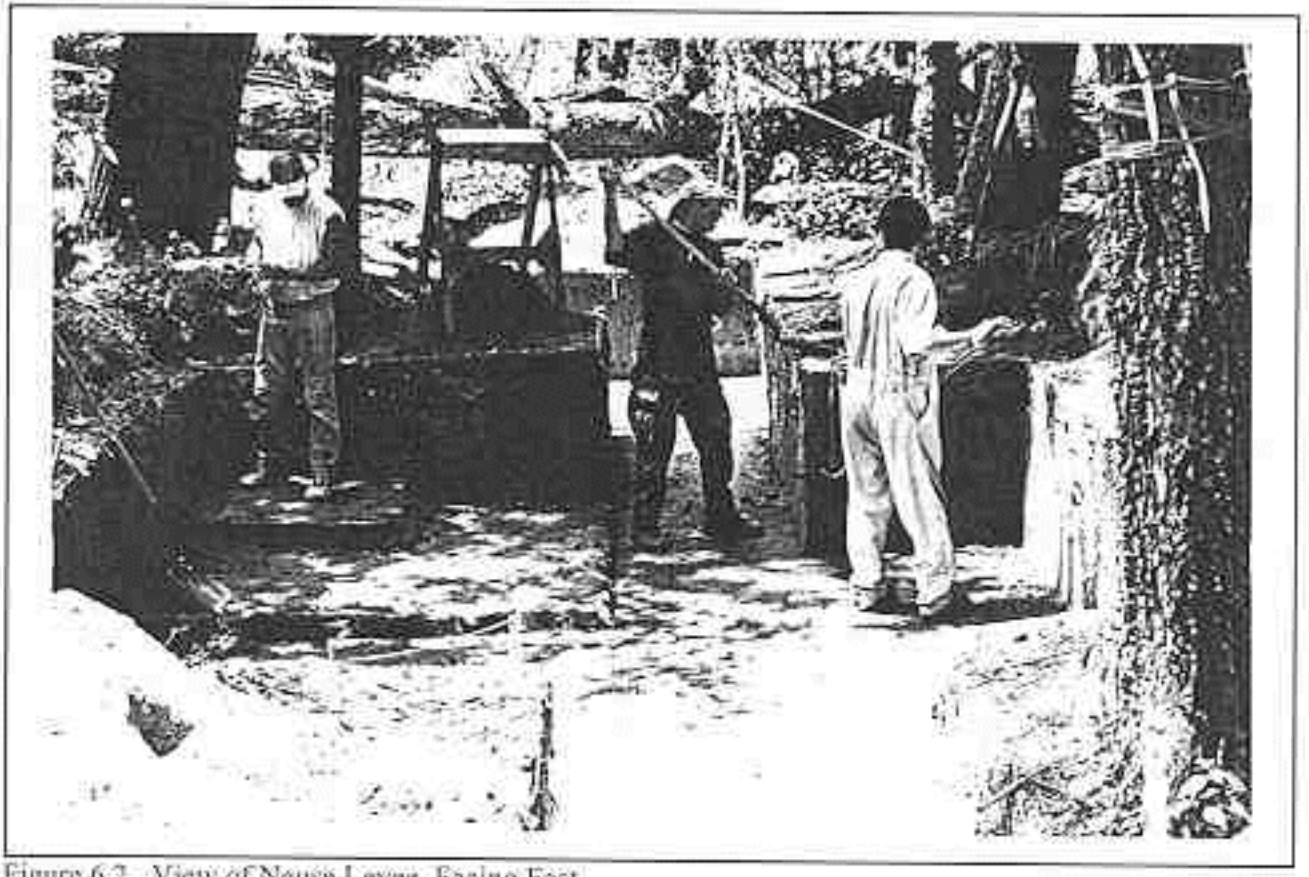
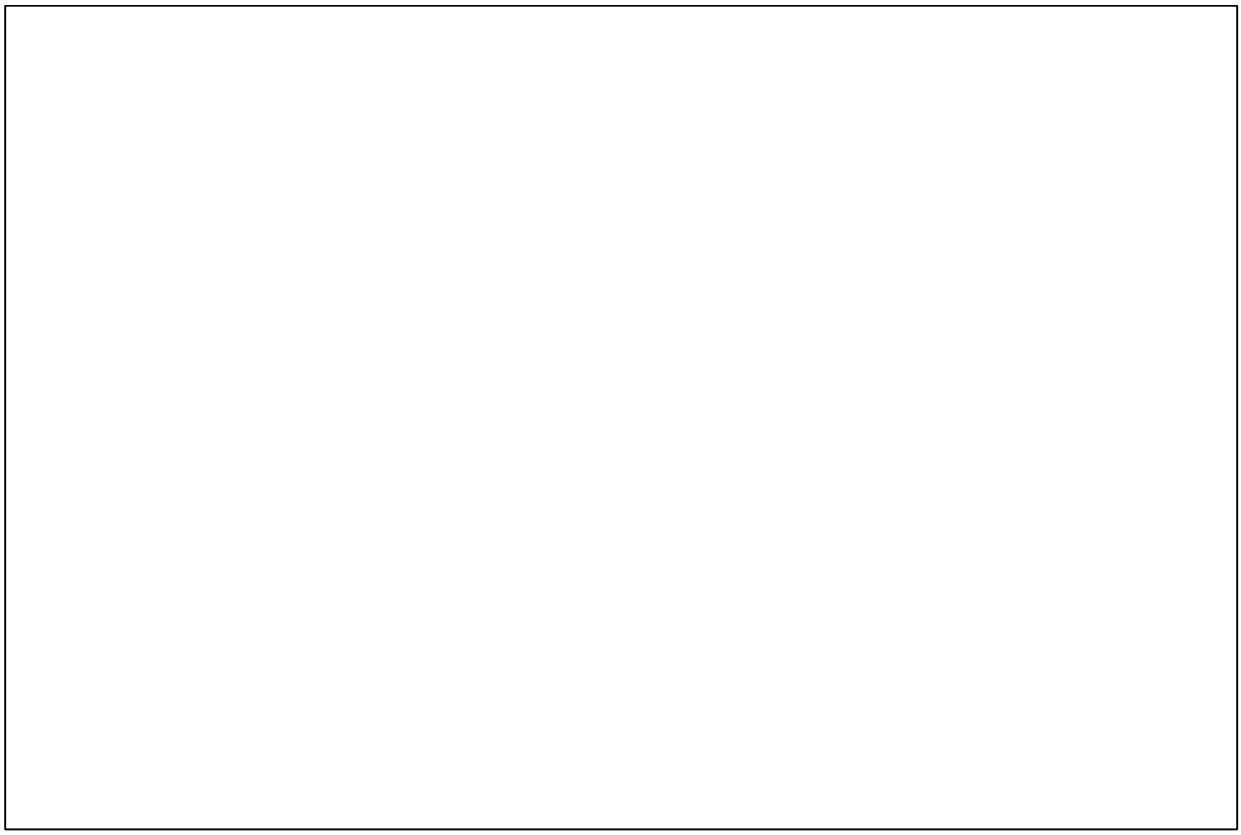


Figure 6.2. View of Neuse Levee, Facing East.



The prehistoric occupation zone is limited to the crest of the levee within an area that is approximately 30 x 20 m (see Figure 6.1). Its western terminus occurs at the western edge of the Bt horizon, which was the river bank at the time of the Late Archaic occupation (see Figures 2.2 and 2.10). The northern edge of the site occurs just south of a dirt road that paralleled Route 401 at the time of Phase III investigations. A low, wet area that is frequently flooded defines the eastern border. The southern perimeter has not been precisely defined because it extends outside of the project right-of-way. It is suspected that the occupation area ends just outside the project corridor, however, as artifact densities drop off dramatically near the right-of-way boundary, which coincides with the southeastern terminus of the levee (Maher 1992a).

PREVIOUS INVESTIGATIONS AT NEUSE LEVEE

Phase I

Neuse Levee was discovered in 1992 during a Phase I archaeological survey conducted by the NCDOT (Maher 1992a). That survey was initiated in response to the planned widening of US 401 between US 1 and SR 2224 northwest of Raleigh in Wake County, North Carolina.

Seven shovel tests containing prehistoric cultural material were excavated at Neuse Levee during the Phase I study (Maher 1992a). Six were placed along the levee crest, which is oriented northwest-southeast. The seventh positive test was located west of Shovel Test 2, which was the most prolific in terms of prehistoric artifact yield. Additional shovel tests conducted to the north, east, and west of the levee did not contain prehistoric cultural material. The southern extent of the site was not precisely determined because it extends out of the project right-of-way. As mentioned above, however, artifact

frequencies dramatically declined in shovel tests near the right-of-way border. That area coincides with the southern terminus of the levee, and it is suspected that the occupation zone does not extend very far beyond that point (see Figure 6.1).

The Phase I artifact inventory is summarized in Table 6.1. The FCR and two pieces of debitage are quartzite; the rest of the lithics are rhyolite. One of the hafted biface fragments is identified as a possible Savannah River point (Maher 1992a:25); the other specimen is too fragmentary to be classified. One diagnostic sherd is present in the ceramic assemblage. It exhibits a fabric-impressed design that is categorized as Badin Fabric Marked (Maher 1992a:25). Savannah River hafted bifaces are associated with Late Archaic technology, while Badin ceramics are found in Early Woodland contexts.

Prehistoric artifacts were encountered to a maximum depth of 90 cm below the surface. In addition, an area of high artifact density was discovered in the vicinity of Shovel Test 2, which yielded 65% (n=76) of the artifacts encountered during the Phase I survey. Since diagnostic artifacts were present at Neuse Levee, and it was likely that one or more of the components was buried and intact, Maher (1992a:25–26) recommended the site potentially eligible for the NRHP. Phase II testing was suggested if the Neuse Levee site could not be avoided during road expansion and bridge replacement.

Phase II

Limited Phase II investigations were conducted at Neuse Levee by the NCDOT in 1993 (Glover 1993). The goal of that study was to evaluate the nature and extent of the archaeological deposits, and assess that information in terms of NRHP criteria.

Table 6.1. Lithic and Ceramic Artifacts Recovered during Phase I Investigations at Neuse Levee (derived from Maher 1992a).

Lithics	n	Ceramics	n
Hafted Biface Fragments	2	Plain	2
Utilized Flakes	4	Fabric-Impressed	1
Debitage	92	Unidentified	13
FCR	1		
Total	99		16

Two test units were excavated during Phase II. Test Unit 1 (TU 1) was a 1-x-1-m pit placed on the modern levee 3 m east of the Neuse River bank. Although it was excavated to a maximum depth of 1.80 m, no cultural material was encountered. The results of subsequent geomorphological investigations conducted during the current study indicate that this area contains very thick deposits of recent alluvial sediments (see Chapter 2).

Test Unit 2 (TU 2) was a 1-x-3-m excavation trench located near the crest of the levee; the artifact inventory is summarized in Table 6.2. One biface is quartz; the rest of the lithic tools are rhyolite. The majority of debitage is rhyolite (58%; n=94), 38% (n=61) is quartzite, and the remaining six specimens (4%) are quartz.

Diagnostic lithics recovered from TU 2 include one Caraway point and one Yadkin hafted biface; both specimens are manufactured from rhyolite. The former type is attributable to a Late Woodland occupation, while the latter is associated with Early and Middle Woodland technology. The two rhyolite bifaces were initially identified as possible Guilfords (Glover 1993:14, 16). Data recovery results, however, indicate they likely belong to the bihafted scraper assemblage that is associated with the Late Archaic component (see below).

Table 6.2. Lithic and Ceramic Artifacts Recovered from Phase II Test Unit Excavations.

Lithics	n	Ceramics	n
Hafted Bifaces	2	Eroded	4
Bifaces	3		
Debitage	161		
Quartz Crystal	1		
Manuport	5		
Total	172		4

Artifacts were discovered to a maximum depth of 1.00 m below the surface; the densest deposits were encountered between 0.75 and 1.00 m. Based on this evidence, and the apparent lack of a plowzone, Glover (1993:12) concluded that intact archaeological deposits existed at the Neuse Levee site. The presence of diagnostic artifacts attributable to the Late Woodland, Early/Middle Woodland, Late Archaic, and possibly Middle Archaic periods suggested that the site was likely to yield important information concerning these eras of prehistory. Therefore, Neuse Levee was recommended eligible for the NRHP under Criterion D.

Data recovery was recommended if the site could not be avoided by construction within the proposed right-of-way. Glover (1993:12) suggested that, if Neuse Levee could not be avoided, Phase III investigations include the excavation of 4-x-4-m blocks on the levee summit after the upper 40–50 cm of topsoil was removed by mechanical means. It was also recommended that geomorphological studies be used to augment the archaeological results by providing data on paleoenvironmental conditions and natural site formation processes.

Construction plans for widening S.R. 401 at the Neuse River crossing included activities that could negatively impact the archaeological deposits at the Neuse Levee site. Therefore, data recovery investigations were implemented in 1998 as part of a Memorandum of Agreement (MOA) to mitigate the adverse effect that construction would have on this important cultural resource.

OVERVIEW OF DATA RECOVERY INVESTIGATIONS

Fifty-nine 1-x-1-m test units were excavated during data recovery, exposing a large portion of the levee crest (see Figure 6.1). A series (n=54) of contiguous test units—collectively designated Block A, Block B, and Archaeological Trench 4—was placed along the spine of the levee in the main occupation zone (Figure 6.3). Five isolated test units were also excavated; they were intended to provide comparative data from the levee's periphery.

The first three test units were hand-excavated in 10-cm arbitrary levels within strata, beginning at the surface. The results indicated that prehistoric cultural material was not present in the upper 10 cm of soil, which is recent alluvium. Therefore, the first excavation level of all additional test units was removed without screening. All test units were excavated into the Bt horizon (LU 1), which developed prior to the first human occupation.

The artifact inventory includes 11,679 lithic and ceramic artifacts (Table 6.3). Fourteen pieces of wood charcoal and five carbonized nut fragments were also recovered during test unit excavations. Flotation samples processed in the laboratory yielded organic material as well. That assemblage is discussed in the section devoted to cultural features and their contents.

Twenty-one (62%) of the 34 hafted bifaces identified in the lithic assemblage can be attributed to a particular culture period or phase (Table 6.4; Figure 6.4). The Late Archaic and Late Woodland periods are well represented in the diagnostic hafted biface inventory, while only a few specimens are attributable to the Early and Middle Woodland periods.

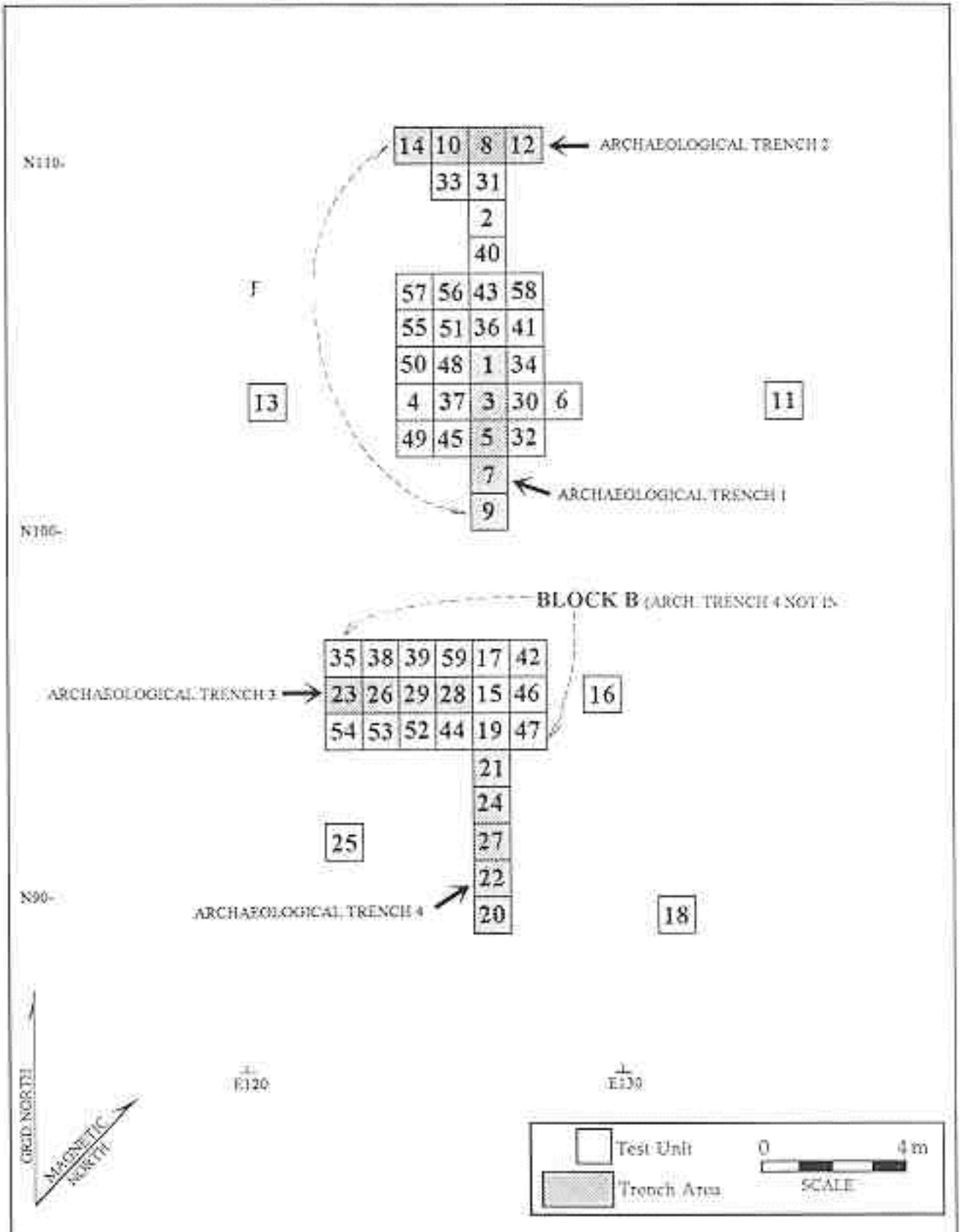


Figure 6.3. Map of Nesse Levee Illustrating Block, Trench, and Test Unit Locations.

Table 6.3. Lithic and Ceramic Artifacts Recovered during Data Recovery Investigations at Neuse Levee.

Lithics	n	Ceramics	n
Hafted Bifaces	34	Fabric-Impressed	76
Hafted Drills	1	Net-Impressed	12
Hafted Scrapers	1	Unidentifiable Decoration	17
Hafted Perforators	7	Sherdlets	94
Bihafted Scrapers	21		
Preforms	8		
Bifaces	11		
Utilized Flakes	31		
Manos	1		
Hammerstone/Battered Cobbles	11		
Celt Flakes	1		
Unidentified Soapstone	7		
Cores	20		
Tested Cobbles	2		
Debitage	10,257		
FCR	324		
Unaltered Cobbles	731		
Mica	2		
Ochre	4		
Graphite	6		
Total	11,480		199

Table 6.4. Diagnostic Hafted Bifaces Recovered During Data Recovery Investigations at Neuse Levee.

Type	n	Raw Material	Culture Period
Small Triangular	8	Rhyolite (6), Quartz (2)	Late Woodland–Historic
Yadkin	1	Quartz	Early/Middle Woodland
Badin	1	Rhyolite	Early Woodland
Eared Yadkin	1	Rhyolite	Early Woodland
Woodland Stemmed	1	Rhyolite	Early Woodland
Savannah River	9	Rhyolite	Late Archaic

The fabric-impressed wares appear to have been deposited during all three Woodland subperiods (Figure 6.5). This assertion is based on technological and stylistic grounds that are discussed at length in Chapter 9. The net-impressed sherds may be part of a single Early Woodland vessel (Figure 6.5b).

Lithics

The nature of the overall lithic assemblage indicates that lithic reduction was a significant activity at Neuse Levee. Debitage constitutes 98.8% (n=10,257) of the chipped stone inventory, while chipped stone tools (excluding preforms) account for only 1.0% (n=106). The presence of 20 cores, two tested cobbles, and 11 hammerstones/battered cobbles also attests to an emphasis on stone tool manufacture.

Lithic tools are abundant, considering the limited area of the occupation zone. The majority are formal chipped stone varieties that were meant to be hafted. There is a significant expedient flake tool assemblage as well; it comprises 29.2% (n=31) of the chipped stone tool inventory.

Complete and fragmentary chipped stone tools include hafted bifaces that are probably projectile points/knives (PP/Ks), hafted bifaces used as perforators, bihafted bifaces that appear to have been used

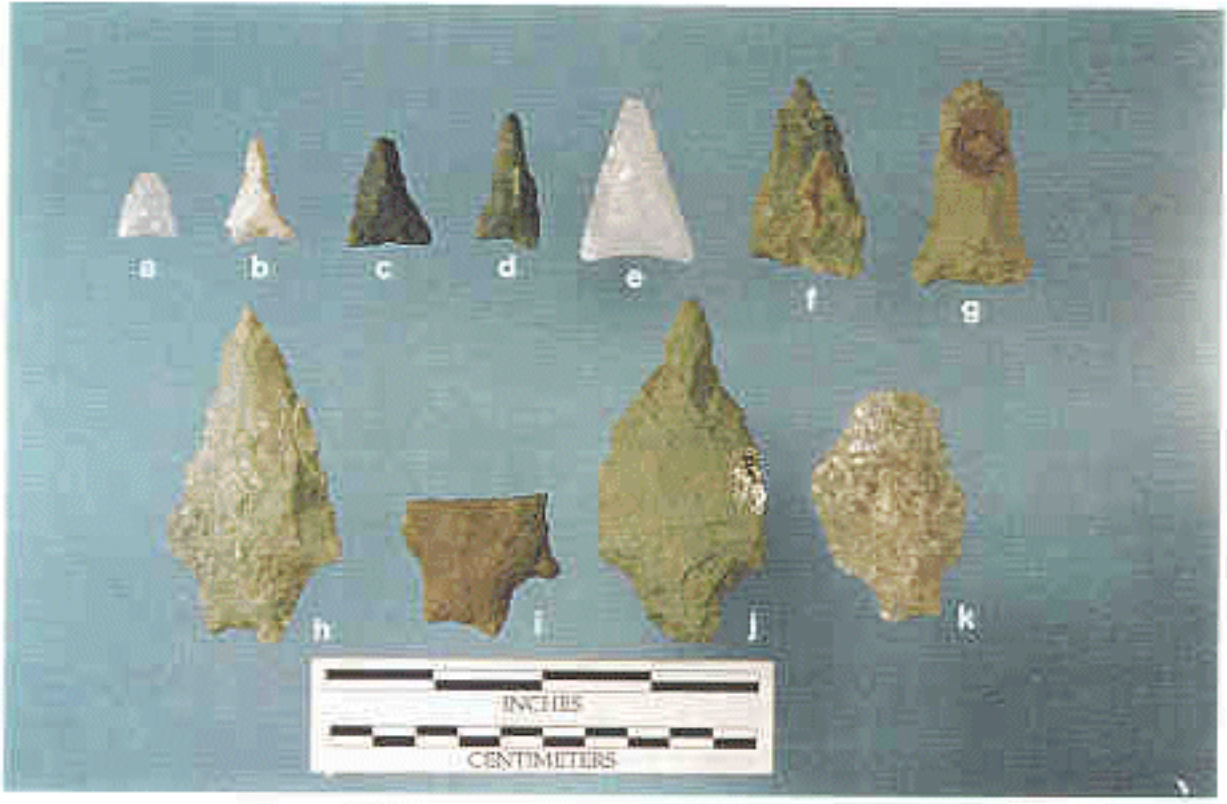
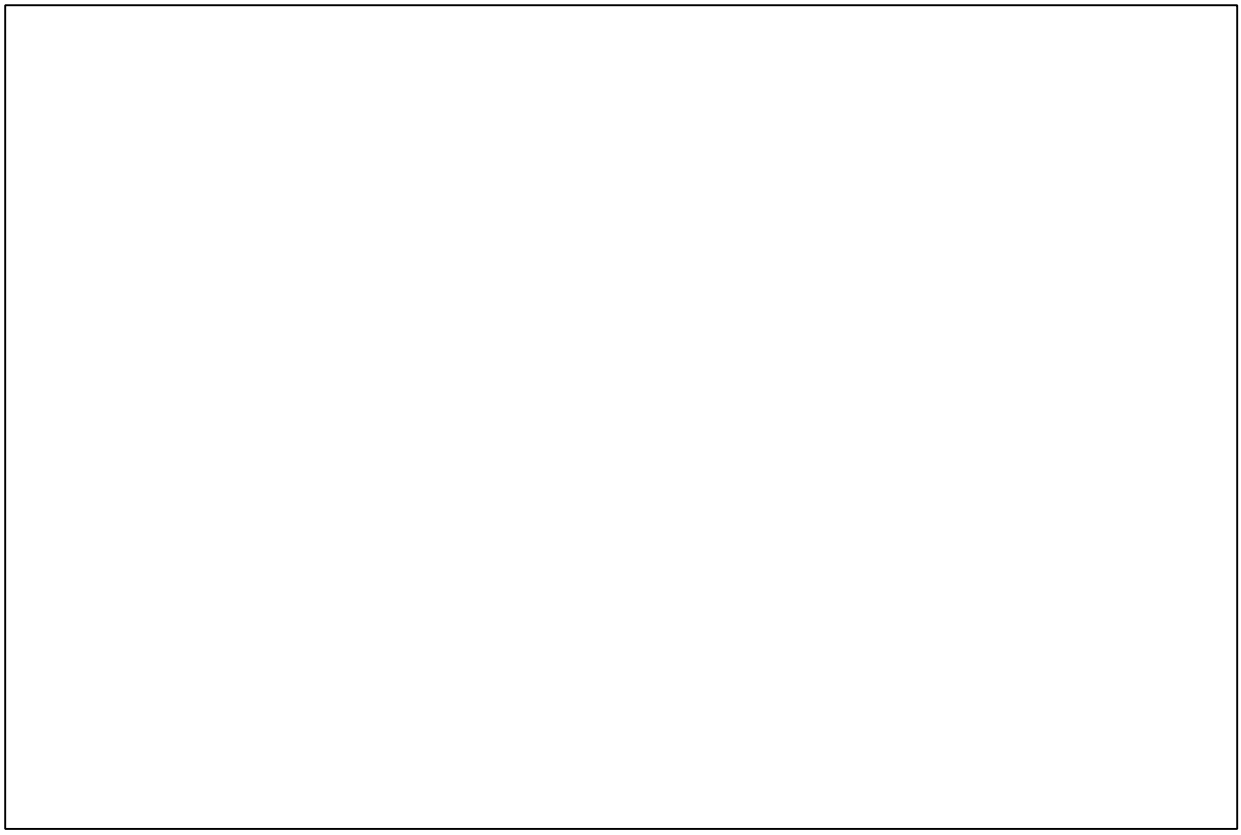


Figure 6.4. Selected Hafted Bifaces Recovered during Data Recovery Investigations at Neuse Levee.



points used as scrapers and/or drawknives, a hafted drill, a hafted scraper, and bifaces that served an unknown function. Eight hafted bifaces are preforms that were broken and/or abandoned during manufacture; it appears they all were intended to be PP/Ks. A few of the bifaces are rather crudely fashioned, and it is suspected they were abandoned during manufacture as well.

The 31 flake tools are utilized flakes that exhibit random scarring. They all appear to be expedient discards, as none have been intentionally retouched or modified to achieve a specific form.

One mano, one celt flake, and seven soapstone fragments represent the ground stone assemblage. The mano is a well-ground circular slab of gneiss that has a flat working edge. The celt flake, as the name implies, appears to have originated from a ground and polished celt or axe. The soapstone fragments are too small to identify by artifact class.

Cobble tools are limited to battered cobbles (n=11) that are probably hammerstones. Fire-cracked rock (n=324) was not particularly abundant, and only a few small clusters were encountered. A relatively large number of unaltered cobbles (n=731) were discovered, most of which appear to be unused raw material sources. However, as is the case with FCR, large concentrated clusters of unaltered cobbles were not present. These objects occurred throughout the excavated area as isolated finds, or in loose association with a few other unaltered cobbles.

A few pieces of unaltered mica, graphite, and ochre complete the lithic inventory. The mica is very fragmentary, and does not appear to have been worked. Graphite and ochre occurred in their mineral state.

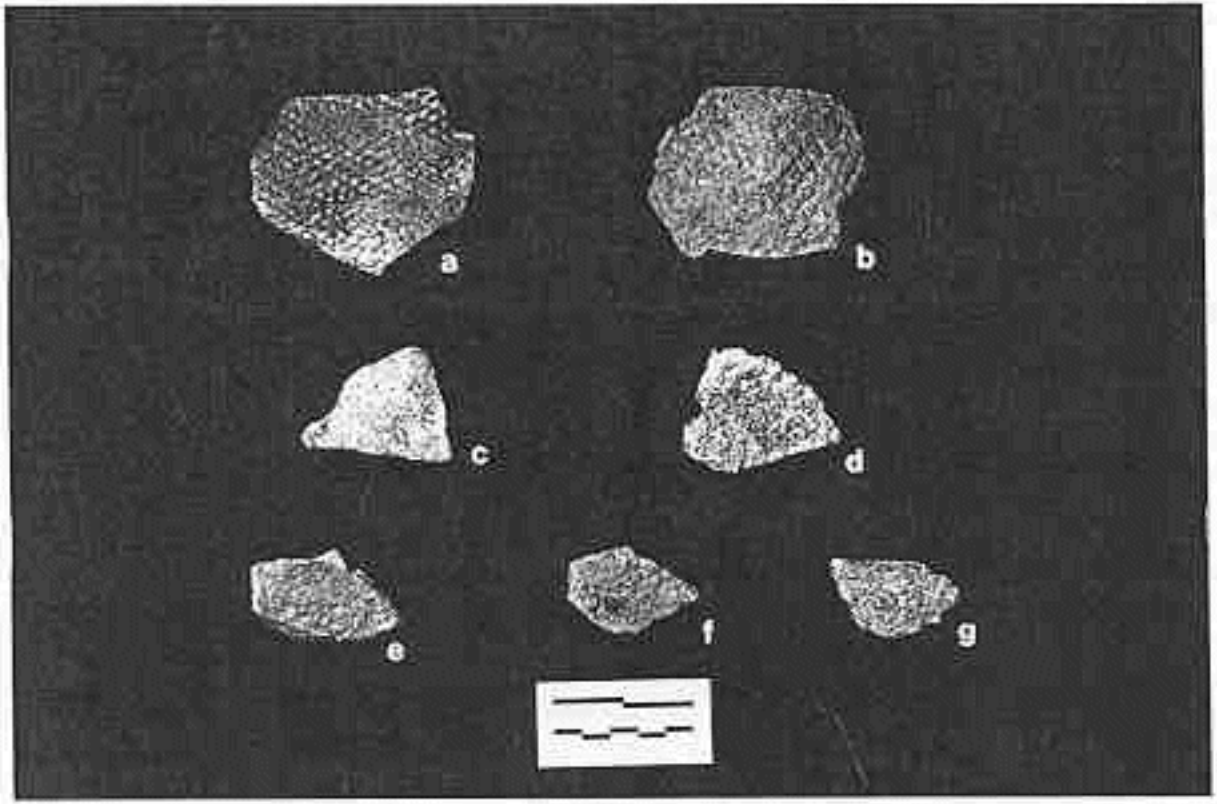
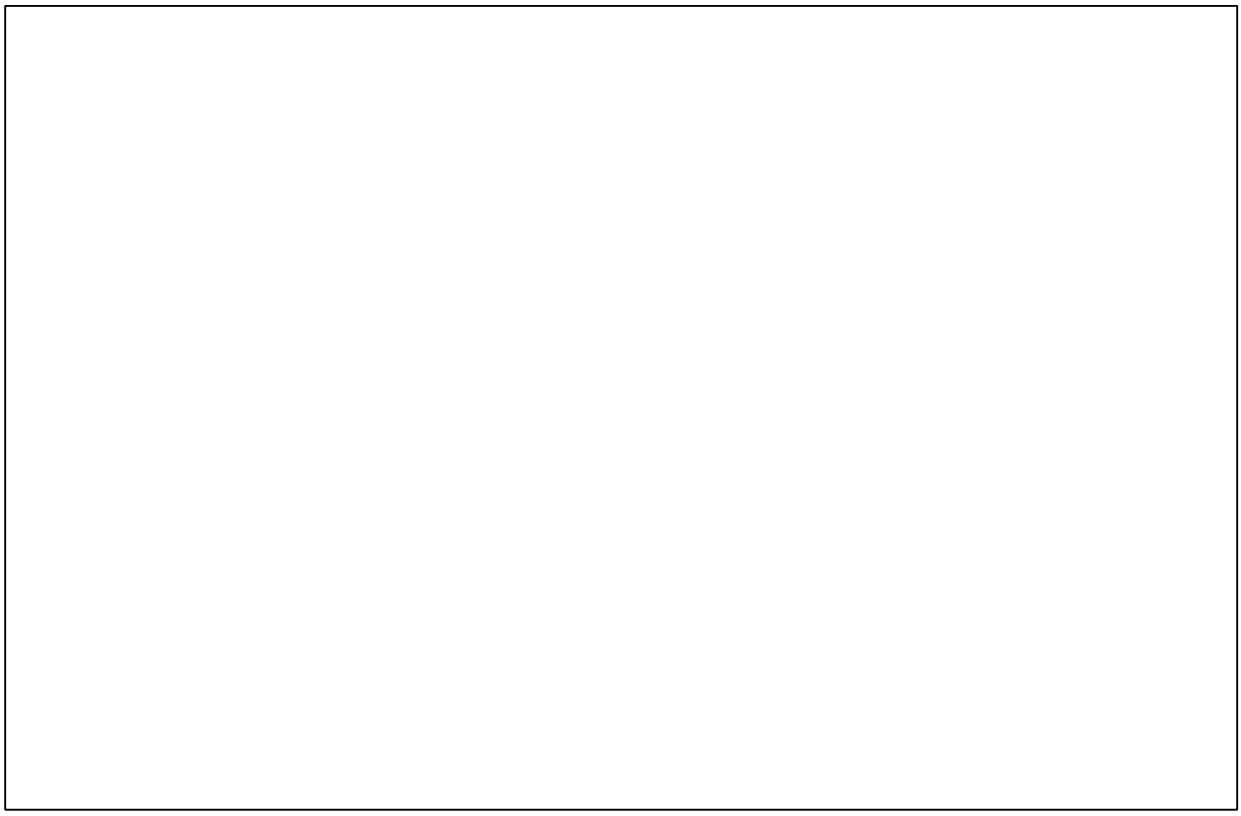


Figure 6.5. Selected Ceramics Recovered during Data Recovery Investigations at Neuse Levee.



The vast majority of lithic raw material is rhyolite (Tables 6.5 and 6.6). It accounts for 89% of all lithic raw material recovered during data recovery, and 94% of the chipped stone. All the chipped stone tool categories are dominated by rhyolite, and it is the exclusive raw material for all but two of those categories. Rhyolite constitutes 88% (n=30) of the hafted bifaces, and 77% (n=24) of the utilized flakes.

Rhyolite comprises 94% (n=9,626) of the lithic debitage and most of the cores and unfinished tools. It accounts for 100% (n=8) of the preforms, 55% (n=11) of the cores, and 50% (n=1) of the tested cobbles.

Rhyolite cobble tools constitute 9% of the hammerstone/battered cobbles (n=1), 1% (n=3) of the FCR, and 59% (n=432) of the unaltered cobbles.

Quartz is the second most numerous raw material type encountered during data recovery. Although it constitutes 6% of the overall lithic assemblage, this raw material category only accounts for 2% of the chipped stone. Quartz chipped stone tools include three hafted bifaces, one hafted scraper, and four utilized flakes.

Quartz makes a very small contribution to the debitage category (2%; n=240), but it accounts for 50% (n=6) of the cores. As is usually the case, quartz is the most common type of FCR; it constitutes 88% (n=284) of that category. Additional quartz artifacts include hammerstones/battered cobbles (55%; n=6) and unaltered cobbles (20%; n=147).

Chipped stone artifacts manufactured from quartzite are limited to debitage, cores, and one utilized flake. Quartzite debitage constitutes 0.4% (n=45) of that category; it accounts for 15% (n=3) of the cores, and 3% of the utilized flakes.

Thirty-one pieces of quartzite have been heat-altered. They comprise 10% of the FCR. Nine unaltered quartzite cobbles are present, accounting for 1% of that artifact class. One tested cobble (50%; n=1) completes the quartzite assemblage.

Almost all of the chert (99%; n=344) recovered during data recovery is debitage; it accounts for 3.4% of that inventory. The remaining portion of the chert assemblage consists of one hafted biface fragment and two utilized flakes. The former constitutes 3% of that tool class, while the latter comprises 7% of the utilized flakes. In terms of the overall assemblage, chert comprises 3% of all lithics and 3% of the chipped stone.

Only one piece of jasper is present in the lithic assemblage. It is a primary unspecialized flake that constitutes less than 0.1% of the chipped stone inventory.

Most of the gneiss artifacts are unaltered cobbles (97%; n=141). Unaltered cobbles of this material constitute 19% of that category. Three pieces of heat-altered gneiss comprise 0.9% of the FCR assemblage. The only mano and only celt flake encountered during data recovery are made from this raw material. Overall, gneiss constitutes 1% of the lithic material.

Less than 0.1% (n=7) of lithic raw material is sandstone. Three pieces of sandstone have been heat altered; these items constitute 1% of that artifact category. Two unaltered cobbles constitute 0.3% of that total. One piece of sandstone that may be a flaking debris was recovered, as was one sandstone hammerstone/battered cobble. The former specimen comprises less than 0.1% of the debitage, and the latter accounts for 9% of the hammerstones/battered cobbles that were recovered.

Ceramics

A significant portion (47%; n=94) of the 199 sherds encountered during data recovery are less than 2 cm across their greatest dimension. These small specimens lack the technological and stylistic attributes necessary for identification and classification. Therefore, they did not receive the analytical scrutiny afforded the remainder of the ceramic assemblage, and are not included in any subsequent analysis discussed in this report.

Most of the remaining 105 specimens exhibit fabric-impressed surfaces (72%; n=76). Twelve (11%) sherds are net-impressed, and may belong to the same vessel. The surface treatment on the rest of the sherds (n=17) cannot be determined. These specimens constitute 16% of the sherds that underwent technological and stylistic analysis.

The projectile point data suggest that at least one occupation occurred during each of the three Woodland subperiods defined for the region. Since fabric- and net-impressed wares were produced throughout the Woodland period, and there is no apparent stratification of the Woodland components, a detailed ceramic analysis was conducted in order to determine if—and to what degree—ceramics were deposited during each of the identified Woodland components. The results of that analysis are presented in Chapter 9. Technological and stylistic details, with regard to the ceramic assemblage, are provided in that chapter of this report.

Table 6.5. Lithic Raw Material Frequencies by Artifact Class at Neuse Levee.

	Rhyolite	Quartz	Quartzite	Chert	Jasper	Gneiss	Sandstone
Hafted Bifaces	30	3		1			
Hafted Drills	1						
Hafted Scrapers		1					
Hafted Perforators	7						
Bihafted Scrapers	21						
Preforms	8						
Bifaces	11						
Utilized Flakes	24	4	1	2			
Manos						1	
Hammerstone/Batt.ered Cobbles	1	6	3				1
Celt Flakes						1	
Cores	11	6	3				
Tested Cobbles	1		1				
Debitage	9.626	240	45	344	1	3	1
FCR	3	284	31			141	3
Unaltered Cobbles	432	147	9				2

* Does not include the self-evident raw material for soapstone, graphite,mica, and ochre.

Table 6.6. Lithic Raw Material Relative Frequencies by Artifact Class at Neuse Levee.

	Rhyolite	Quartz	Quartzite	Chert	Jasper	Gneiss	Sandstone
Hafted Bifaces	88.2	8.8		3.0			
Hafted Drills	100.0						
Hafted Scrapers		100.0					
Hafted Perforators	100.0						
Bihafted Scrapers	100.0						
Preforms	100.0						
Bifaces	100.0						
Utilized Flakes	77.4	12.9	3.2	6.5			
Manos						100.0	
Hammerstone/Batt.ered Cobbles	9.1	54.5	27.3				9.1
Celt Flakes						1	
Cores	55.0	30.0	15.0				
Tested Cobbles	50.0		50.0				
Debitage	93.8	2.3	0.4	3.4	<0.1		<0.1
FCR	0.9	87.7	9.6			0.9	0.9
Unaltered Cobbles	59.1	20.1	1.2			19.3	0.3
Mica							
Ochre							
Graphite							
TOTAL							

* Does not include the self-evident raw material for soapstone, graphite,mica, and ochre.

Features

Five features associated with prehistoric human activity at Neuse Levee were discovered during data recovery investigations (Figure 6.6). They are designated Feature 2 through Feature 6; Feature 1 was a soil anomaly that was eventually determined to be a tree stain. The five features include a small pit, two small clusters of FCR, and two debitage concentrations. All are associated with the Late Archaic component by nature of their provenience; they were found on or in the surface of the Bt horizon (Lithologic Unit 1) between 77 and 87 cm below the surface. Unfortunately, charcoal sufficient for radiocarbon analysis was not associated with any of the features.

Feature 2

This small, loosely defined rock cluster was discovered in Block A on the surface of the Bt horizon 80 cm below the surface (Figures 6.7 and 6.8). It was oriented in a linear fashion from northwest to southeast for approximately 1.3 m; its maximum width is about 1 m. The function or activity associated with this feature is unknown.

The cluster consists of six unaltered cobbles and four pieces of FCR. Four of the unaltered cobbles are rhyolite, one is quartzite, and one is gneiss. Two rhyolite hafted perforators were found in association. No floral or faunal remains were discovered in the flotation sample.

Feature 3

Feature 3 was a small rock concentration discovered at the southern end of Archaeological Trench 4 (Figures 6.9 and 6.10). It was encountered 77 cm below the surface, at the interface of the Bw and Bt horizons. The cluster was a maximum of 40 cm long and 20 cm wide. The function or activity associated with this feature is unknown.

Feature 3 consists of four unaltered cobbles and three pieces of FCR. No tools or soil stains were associated. Identifiable charred botanical remains discovered in the flotation sample from this feature include 15 pieces of charred pine and four hickory nut fragments (<0.1 g). Faunal remains were not present.

Feature 4

This small, shallow, irregularly shaped pit was encountered in the northern end of Block A 78 cm below the surface (Figures 6.11 and 6.12). Bowl-shaped in profile, this 54-x-45-cm soil anomaly extended 3 cm into the Bt horizon. The function of this feature is unknown.

The surrounding soil matrix consists of strong brown sandy silt mottled with dark yellowish brown sandy silt. The fill consisted of brown sandy silt mottled with dark yellowish brown sandy silt. Very small flecks of charcoal were dispersed throughout the fill, but there was not enough of a sample to submit for radiocarbon dating.

Identifiable charred botanical remains include 13 pieces of pine, two pieces of oak, three hickory nut fragments, and one hickory nut husk. The sample had a total weight of 0.8 g. According to the flotation results, no faunal material was present.

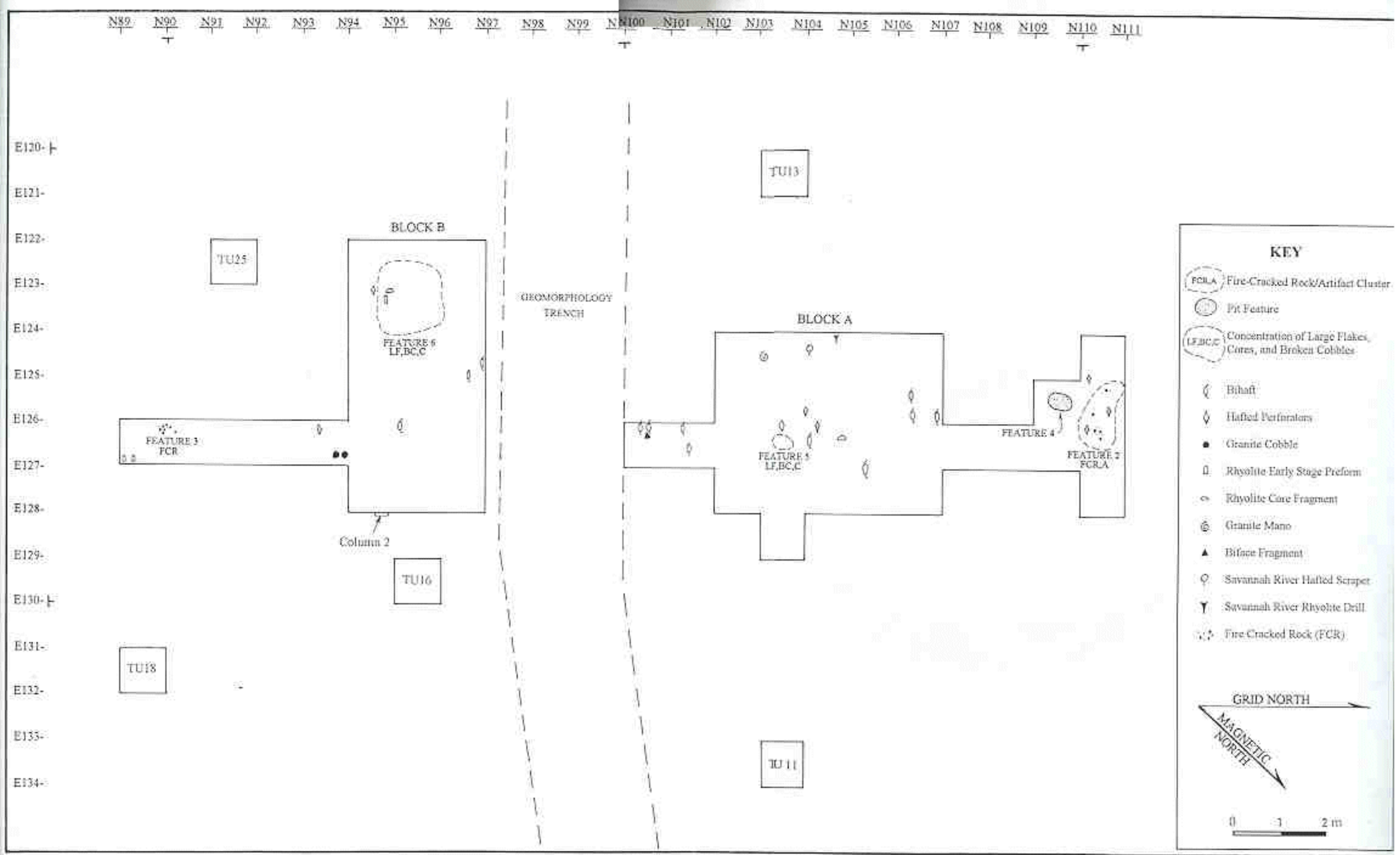


Figure 6.6. Map of Neuse Levee Illustrating Feature Locations in the Late Archaic Horizon.

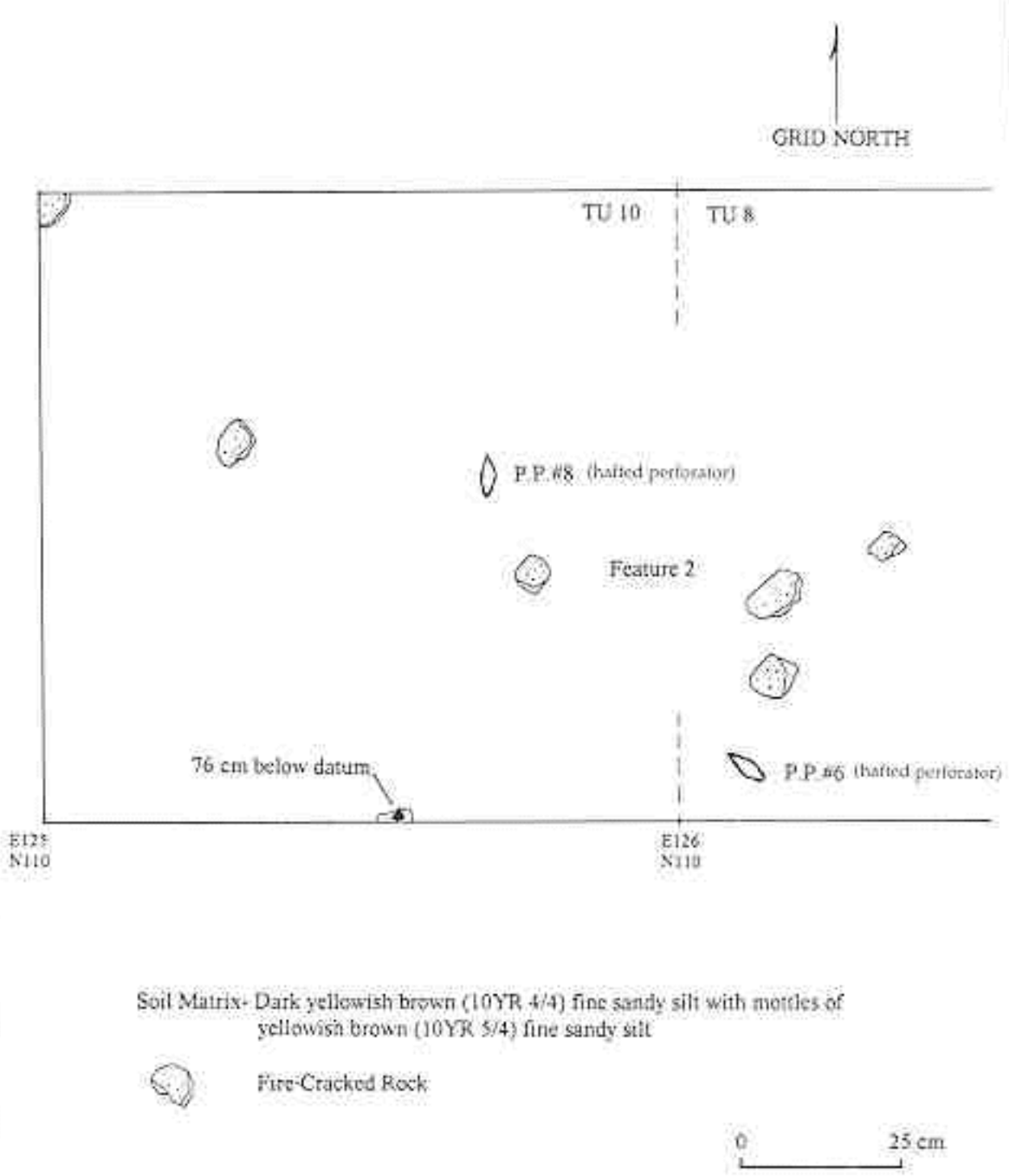


Figure 6.7. Plan View of Feature 2.

Figure 6.8. View of Feature 2.

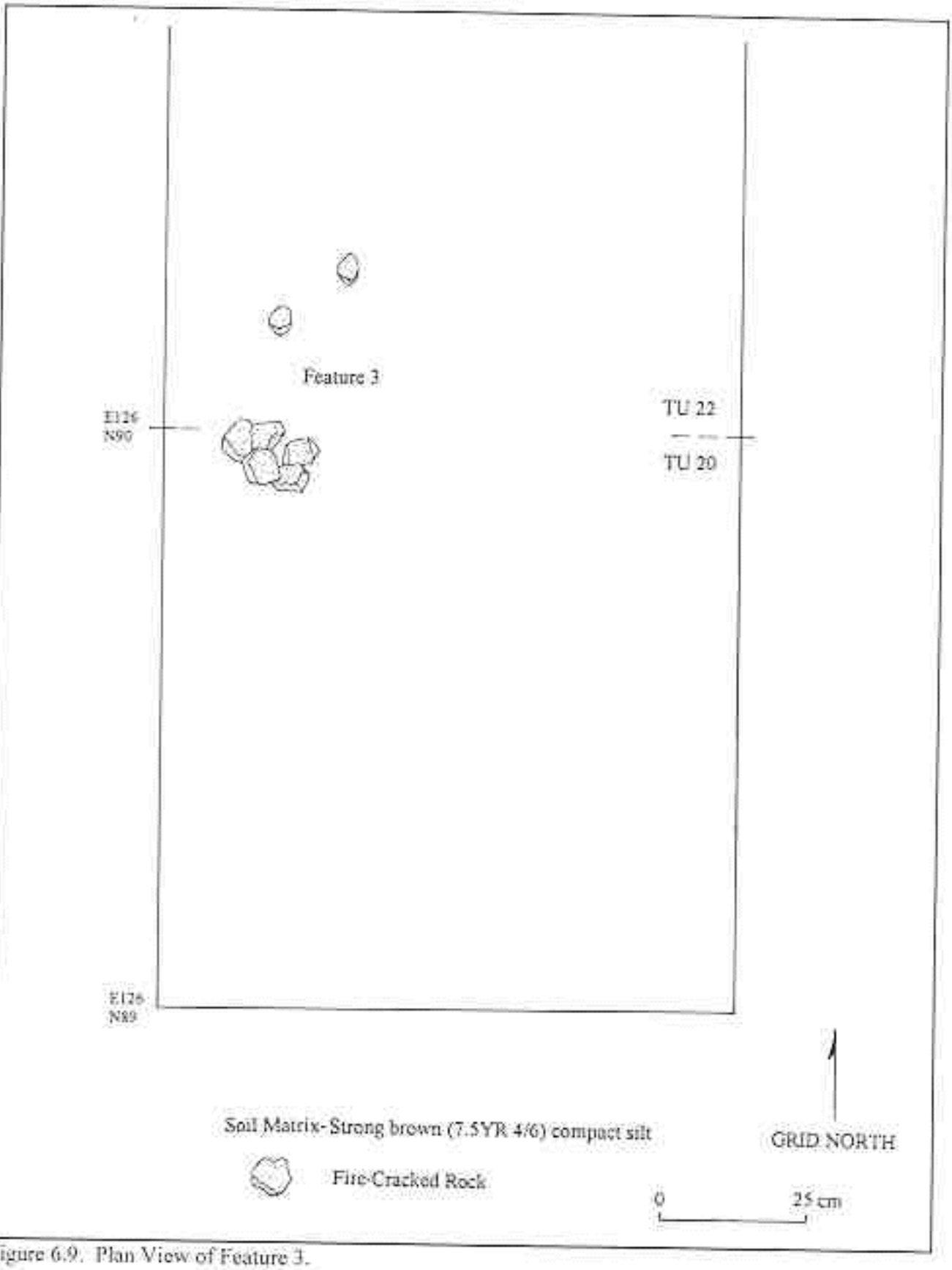
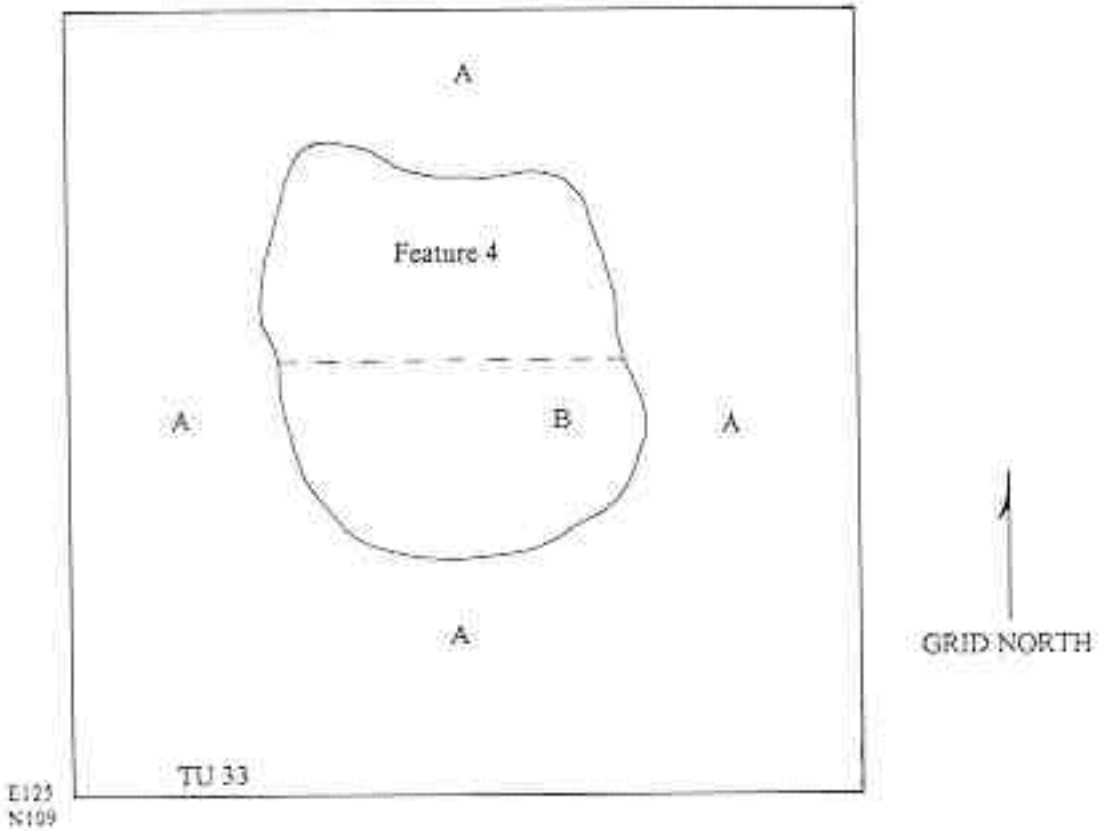


Figure 6.9. Plan View of Feature 3.

Figure 6.10. View of Feature 3.

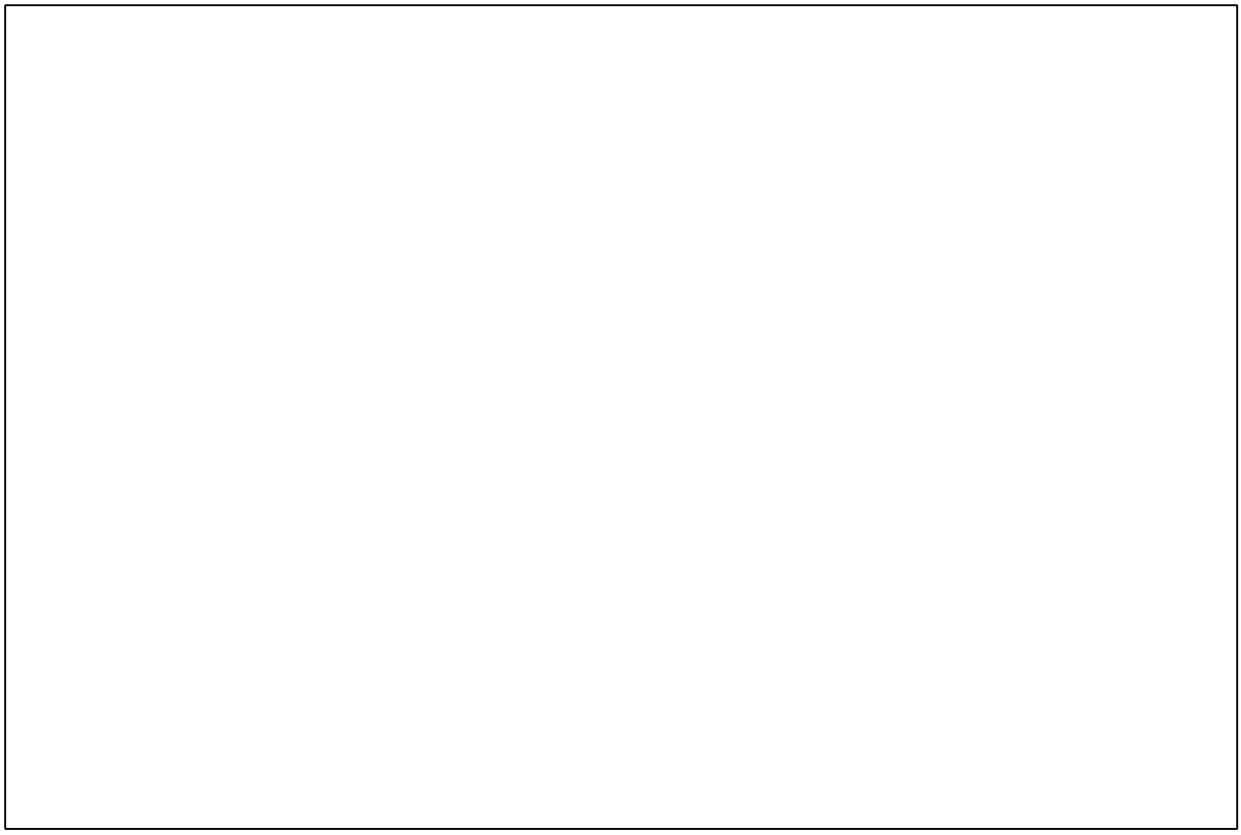


A Strong brown (7.5YR 4/6) sandy silt with mottles of dark yellowish brown (10YR 4/4) sandy silt

B Brown (10YR 4/3) sandy silt with mottles of dark yellowish brown (10YR 4/4) sandy silt

Figure 6.11. Profile and Plan View of Feature 4.

Figure 6.12. View of Feature 4.



Feature 5

Feature 5 was a dense concentration of rhyolite debitage in Block A (Figures 6.13 and 6.14). It was discovered in the surficial layer of the Bt horizon 80 cm below the surface. The debitage was concentrated in a 1-x-1-m area; it was not associated with a soil stain.

This debitage concentration consisted of 118 large rhyolite flakes, many of which could be refitted; it is probably the remnant of a single reduction episode that utilized one large cobble. Charred botanical remains recovered from the flotation sample include pine, oak, and hickory nut. The entire sample totaled less than 0.1 g. Faunal remains were not present.

Feature 6

This artifact concentration was encountered 87 cm below the surface in Block B, immediately above the Bt horizon (Figures 6.15 and 6.16). It was approximately 30 cm long east-west. The north edge of the feature was clipped by the initial Trench 3, so the north-south length is unknown but is at minimum 20 cm.

Feature 6 consists of nine large rhyolite flakes, one rhyolite tested cobble, and one rhyolite biface. Most of the flakes can be refitted to the tested cobble. No soil stain was present, but this feature appears to have been part of an intensive lithic reduction episode that resulted in the deposition of several hundred large rhyolite flakes that saturated the coterminous excavation levels in test units placed immediately to the north (see Figure 6.6). The charred botanical assemblage derived from the flotation sample is limited to two pieces of pine (0.1 g).

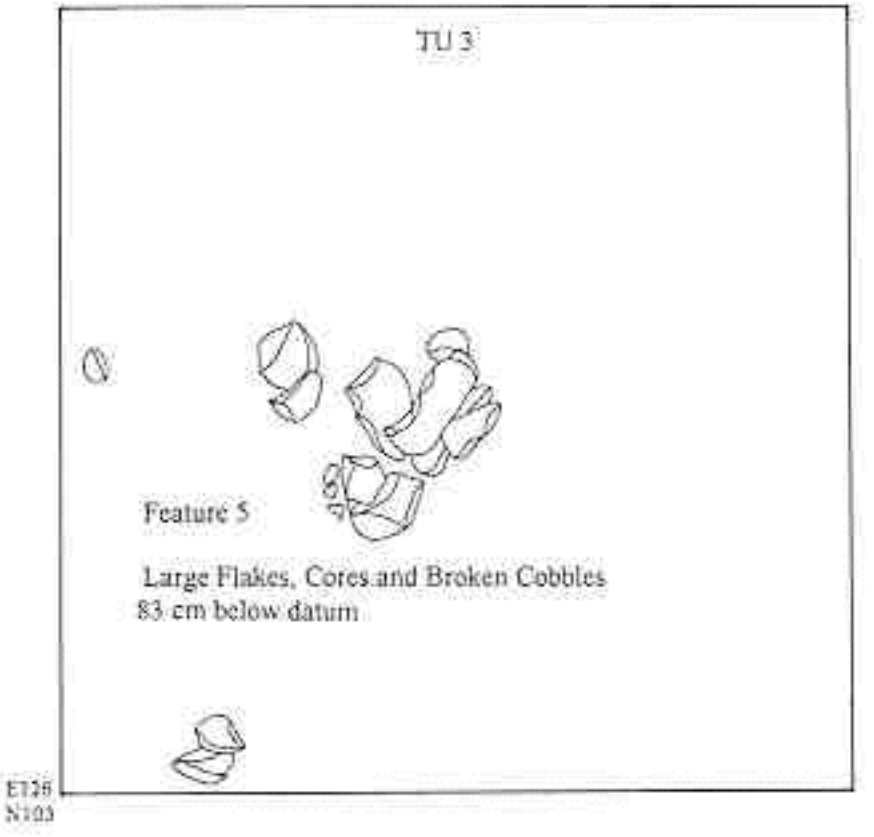
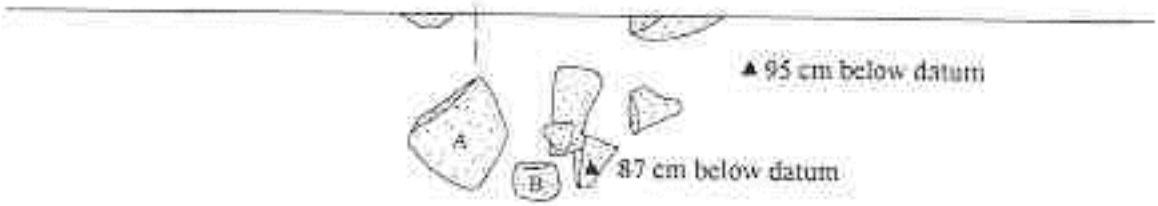
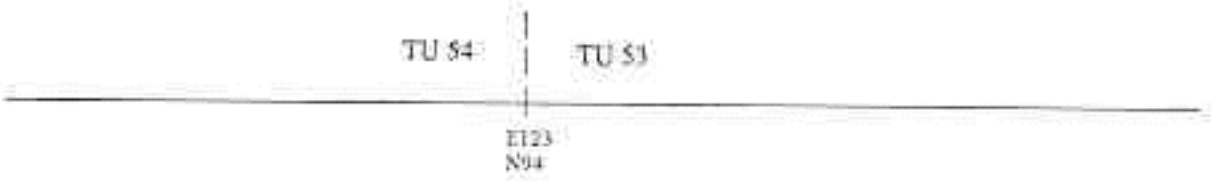


Figure 6.13. Plan View of Feature 5 as Initially Exposed.

Figure 6.14. View of Feature 5.



Feature 6



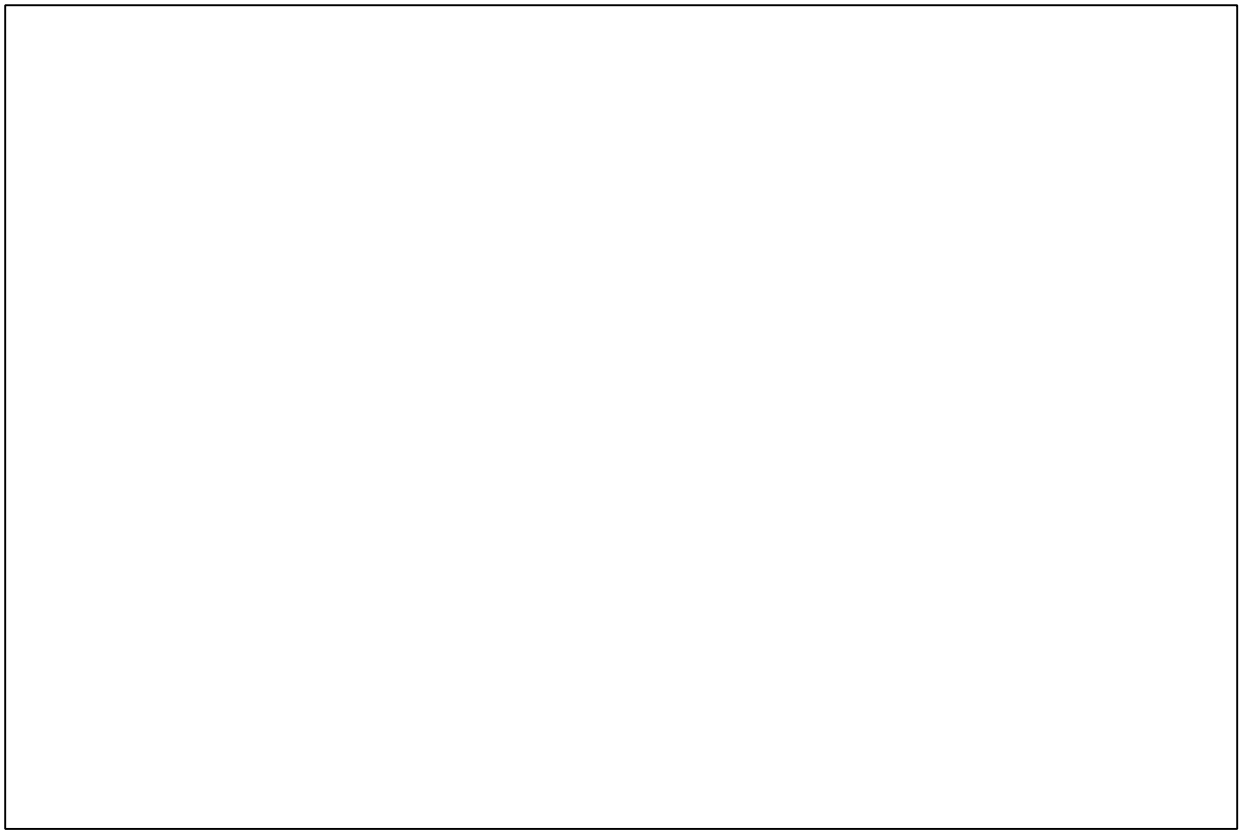
A & B Rhyolite cobble fragments. All the rest are debitage.

GRID NORTH

0 25 cm

Figure 6.15. Plan View of Feature 6.

Figure 6.16. View of Feature 6.



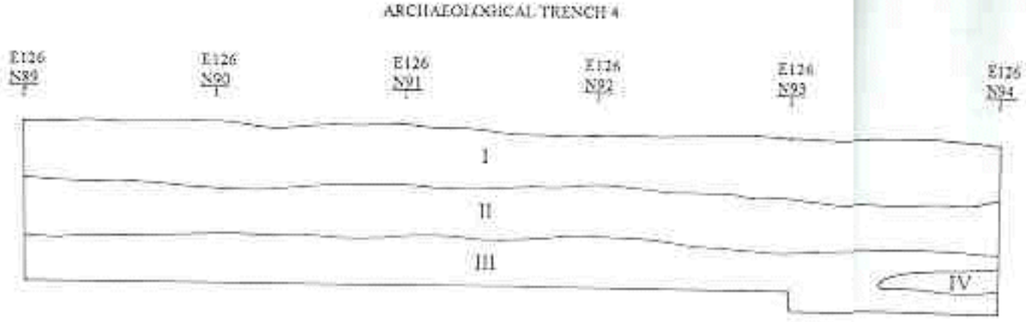
Archaeological Trench 4 was a 1-x-5-m excavation trench along the levee crest in the southern portion of the site. Maximum excavation depths reached 90 cm below the surface, and all test units penetrated the Bt for at least one excavation level (Figure 6.17).

As stated previously, five isolated 1-x-1-m test units were placed around the perimeter of the main excavation area. Maximum excavation depths ranged from 77 to 190 cm below the surface (see Figures 6.18 and 6.19). Test unit results indicate that prehistoric activity on the periphery of the levee was limited. They also add supporting evidence that deeply buried archaeological deposits are not present in the Bt horizon.

BLOCK, TRENCH, AND TEST UNIT RESULTS

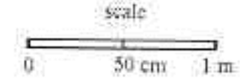
This section presents the results from the three excavation schemes utilized during data recovery; the assemblages from each are summarized in Tables 6.7–6.9. Blocks A and B are the only excavation areas that yielded diagnostic lithics. Each block contained at least one specimen associated with each identified component (Table 6.10). Block A, the eastern portion of Block B, and Archaeological Trench 4 are oriented along the crest of the levee. The soil stratigraphy is relatively uniform throughout this area (see Figures 6.17–19). The western portion of Block B, however, extends over the former river bank, and the sediments slope accordingly (Figure 6.20).

Block A is 31 m^2, most of this area consisted of contiguous 1-x-1-m units that extended from the original 1-x-5-m excavation trench (Archaeological Trench 1). Archaeological Trench 1 was eventually



Soils of Archaeological Trench 4 in Block B (North-South Profile)

I	Dark yellowish brown (10YR4/4) loam grading to loamy silt
II	Dark yellowish brown (10YR 4/3) fine sandy silt - occasional mottles of yellowish brown (10YR 5/4) silt
III	Strong brown (7.5YR 4/6) loamy sand - occasional mottles of dark yellowish brown (10YR 4/4) fine sandy silt, mineral staining with depth
IV	Same as stratum II



Soils of Archaeological Trench 1 and Northward in Block A (North-South Profile)

I	Brown (10YR 3/4) loam grading to loamy silt - homogeneous
II	Dark yellowish brown (10YR 4/4) fine sandy silt with moderate mottles of yellowish brown (10YR 5/4) sandy silt
III	Strong brown (7.5YR 4/6) loamy sand with moderate mottles of yellowish brown (10YR 5/4) silty fine sand
IV	Light olive brown (2.5Y 5/4) silty fine sand with moderate to heavy mottles of dark brown (10YR 4/4) silty sand
V	Same as stratum III
VI	Dark yellowish brown (10YR 4/6) sand mottled with yellowish brown (10YR 5/8) sand
VII	Yellowish brown (10YR 5/8) compact sand
VIII	Yellowish brown (10YR 5/4) sand with some light olive brown (2.5Y 5/4) sand present
IX	Yellowish brown (10YR 5/8) loose sand and small pockets of light olive brown (2.5Y 5/4) sand

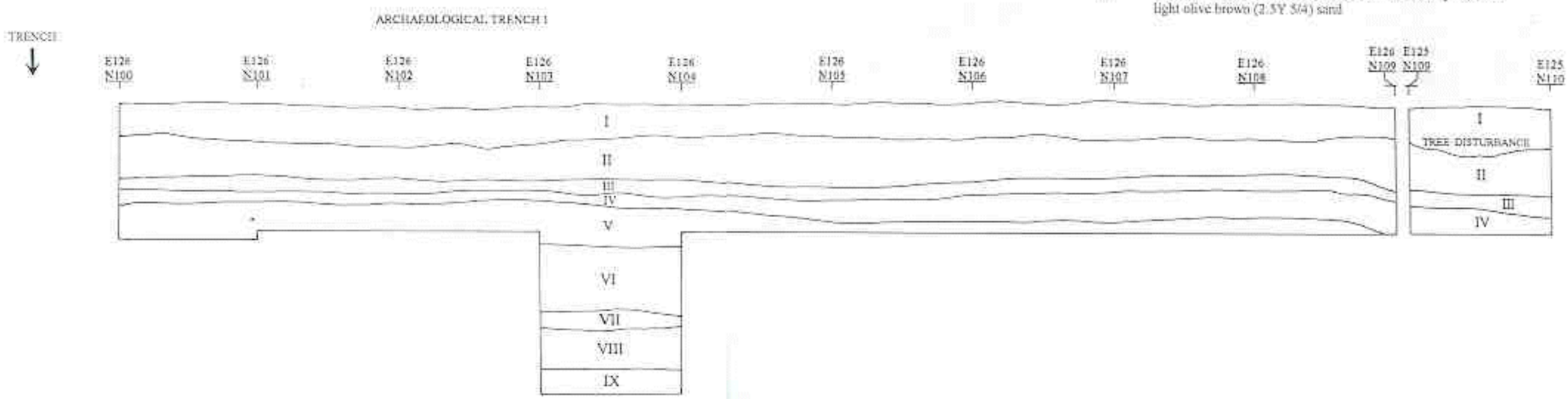


Figure 6.17. North-South Profile of Block A and Archaeological Trench 4.

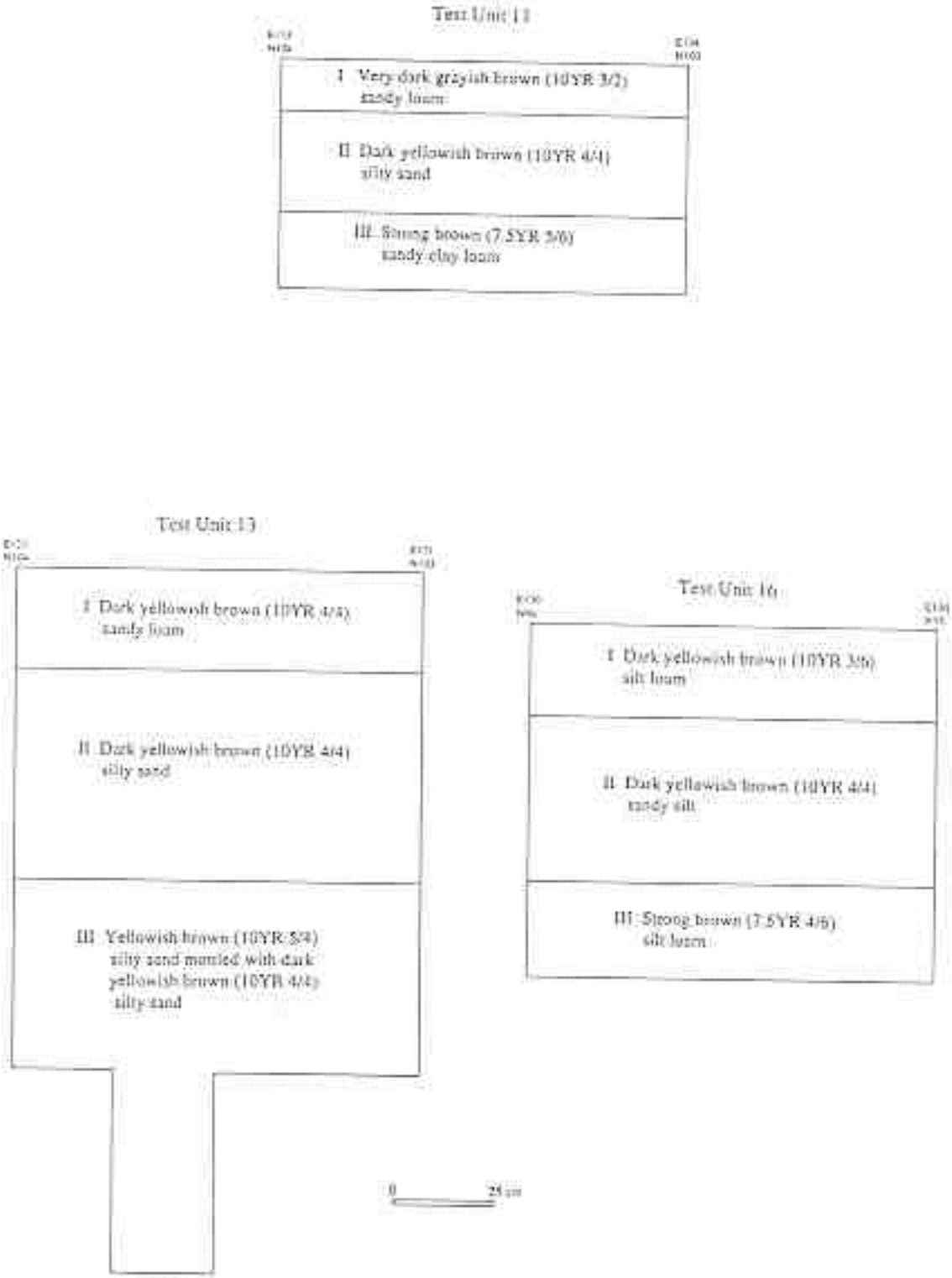


Figure 6.18. Soil Profiles of Test Units 11, 13, and 16.

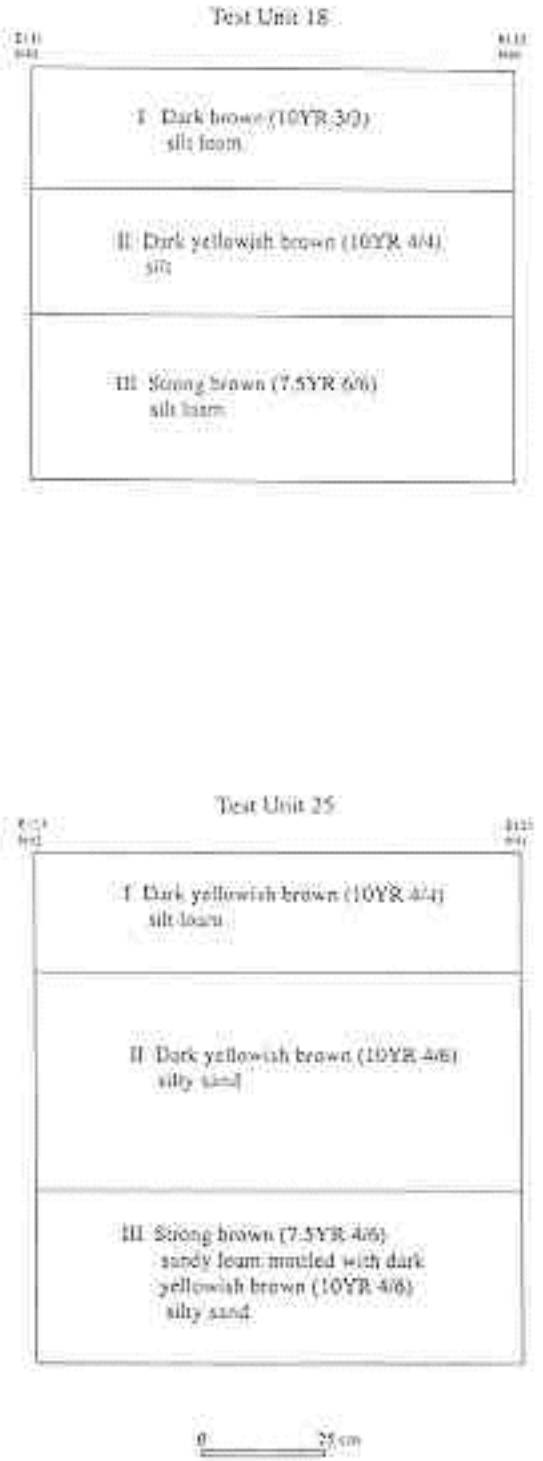


Figure 6.19. Soil Profiles of Test Units 18 and 25.

Table 6.7. Ceramic Artifact Frequencies by Data Recovery Excavation Scheme at Neuse Levee.

	Fabric Impressed	Net-Impressed	UID-Decoration
Block A	50		10
Block B	14		3
Arch. Trench 4	3	12	1
TU 11			
TU 13			
TU 16	1		1
TU 18	6		1
TU 25	2		1
Total	76	12	17

Table 6.8. Diagnostic Lithic Frequencies by Excavation Block at Neuse Levee.

	Block A	Block B
Small Triangular	3	5
Yadkin	1	
Badin		1
Eared Yadkin		1
Woodland Stemmed	1	
Savannah River	2	7
Total	7	14

connected to Archeological Trench 2, and the entire excavated area defines the full extent of Block A (see Figure 6.2).

Most test units in Block A were excavated to between 90 and 100 cm below the surface, until at least two excavation levels penetrated the Bt horizon. A sample test unit, Test Unit 3, was excavated to a maximum of 220 cm below the surface. It extended more than 1 m into the Bt horizon, and confirmed that buried archaeological deposits did not exist below the surficial layer of the Bt (see Figure 6.17).

Block B is an 18 m^2 rectangular area that was expanded from the original 1-x-4-m Archaeological Trench 3 (see Figure 6.3). Excavations reached a maximum of 130 cm below the surface in the western portion of the block, where the Bt horizon sloped towards the river when it was an exposed surface (Figure 6.20). The eastern portion of Block B was on the levee crest, and excavation depths mirrored that of Block A in that area. All Block B test units were excavated at least one level into the Bt horizon.

Horizontal Artifact Distributions

Even accounting for the discrepancy in total volume excavated, there are no significant differences in the lithic tool assemblages associated with Block A, Block B, and Archaeological Trench 4 (see Tables 6.9 and Table 6.10). Lithic tools, in terms of numbers and diversity, are well represented in all three excavation areas. With the possible exception of Savannah River hafted bifaces, diagnostic lithics are distributed evenly across the northern (Block A) and southern (Block B) portions of the site (see Table 6.8). This evidence suggests that the prehistoric levee crest was used during all prehistoric occupations.

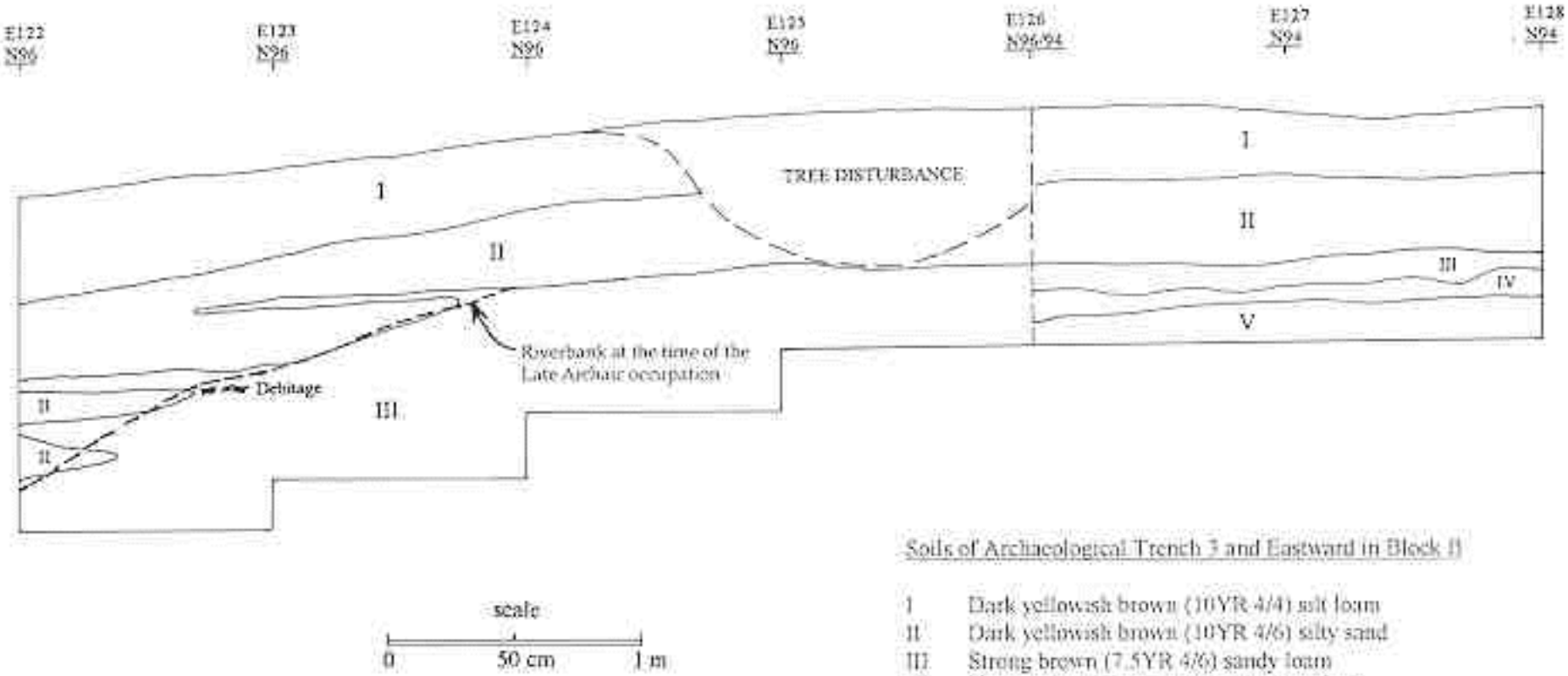
The paucity of tools in the dispersed test units suggests that fewer activities occurred on the site's perimeter than on the current levee crest. The general lack of artifacts in Test Units 11, 13, and 25 indicates that, for some reason, the southwestern, northwestern, and northeastern portions of Neuse Levee were not utilized to any large extent.

Table 6.9. Lithic Artifact Frequencies by Data Recovery Excavation Scheme at Neuse Levee.

	Block A	Block B	Arch. Tr. 4	TU 11	TU 13	TU 16	TU 18	TU 25
Hafted Bifaces	15	17	2					
Hafted Drills	1							
Hafted Scrapers	1							
Hafted Perforators	4	2	1					
Bihafted Scrapers	14	7						
Preforms	1	6	1					
Bifaces	7	2					1	
Utilized Flakes	15	10	4			1	1	
Unidentified Soapstone	1	2	2					2
Manos	1							
Hammerstone/Batt.ered Cobbles	4	5	2					
Celt Flakes		1						
Cores	9	10				1		
Tested Cobbles		2						
Debitage	4,473	4,869	557	13	6	92	223	24
FCR	149	106	62			3	2	2
Unaltered Cobbles	336	288	87			2	17	1
Mica	2							
Ochre	1	2	1					
Graphite		2	3				1	
TOTAL	5,034	5,331	722	13	6	99		29

Table 6.10. Chipped Stone Raw Material Frequencies by Data Recovery Excavation Scheme at Neuse Levee.

	Block A	Block B	Arch. Tr. 4	TU 11	TU 13	TU 16	TU 18	TU 25
Rhyolite	4,348	4,753	433	10	5	42	120	20
Chert	55	62	97	2		41	89	1
Quartz	118	68	34	1	1	11	17	3
Quartzite	8	41	1					
Jasper	1							
Sandstone		1						



Soils of Archaeological Trench 3 and Eastward in Block B

I	Dark yellowish brown (10YR 4/4) silt loam
II	Dark yellowish brown (10YR 4/6) silty sand
III	Strong brown (7.5YR 4/6) sandy loam
IV	Same as II with occasional mineral stains
V	Same as III with occasional mineral stains

Figure 6.20 East-West Profile of Block B

Heavy artifact concentrations in the western portion of Block B, which occurred on the river bank slope of the Bt horizon, indicate that the bank was being used during the initial Late Archaic occupation (see below). Consequently, proximity to the river's edge was evidently not prohibitive site activity during that visit. Test Units 11 and 25 are east of the westernmost units in Block B and, therefore, east of the ancient river bank, so another explanation for the general lack of artifacts in these test units is warranted. They could be out of the locus of activity or in activity areas that produced few or perishable residues.

The river had migrated westward by Woodland times, leaving the western edge of the levee dry and exposed, so proximity to the river cannot be proposed as an explanation for the lack of cultural deposits on the west side of the site for any of the identified components at Neuse Levee. Perhaps the vegetation was too thick, or some other archaeologically invisible circumstance prevented this area from being used when the site was occupied.

Judging from current conditions and the geomorphological evidence concerning the natural history of the levee's formation, the northeastern portion of the site may have been low and wet for most of the Holocene. Therefore, it was probably not hospitable for most human enterprises conducted at this location during the prehistoric era.

Rhyolite and chert are present in relatively equal proportions in Blocks A and B. Rhyolite debitage is underrepresented in Archaeological Trench 4, however, even when the trench's smaller size is taken into account. This is related to the intensive rhyolite reduction episodes that apparently took place in Blocks A and B during one of the Late Archaic occupations (Figure 6.21).

In contrast, chert is over-represented in Archaeological Trench 4. A high proportion of chert also occurs in Test Units 16 and 18, which were placed east of Archaeological Trench 4. According to a detailed analysis of vertical raw material distributions, chert appears to be associated almost exclusively with Woodland technology at Neuse Levee (see Chapter 10). If so, the horizontal distributional data indicate that the southeastern portion of the site was most heavily used during one or more of the Woodland occupations. A three-dimensional plot of ceramic distributions supports this contention, as two large "spikes" in ceramic frequency occur in that area (Figure 6.22). The large spike at E126 N90 is caused by the presence of 12 net impressed sherds that are probably part of the same vessel. The other spike occurs in Test Unit 18, in the extreme southeastern section of the site. Most of those sherds (85.7%; n=6) are fabric-impressed.

Fabric-impressed sherds occur in several places throughout the site, however, and not only in association with high proportions of chert (Figure 6.23). This is likely because the fabric impressed wares are attributable to more than one Woodland occupation. Fabric-impressed pottery occurs throughout the Woodland sequence in the project region (see references to Late Woodland fabric impression in Phelps 1983; Rogers 1993; Woodall 1998), and technological aspects of vessel production are more diagnostic than taxonomic classifications defined by general surface treatment categories such as fabric-impressed, net-impressed, cord-marked, check-stamped, etc. The detailed ceramic analysis conducted on the Neuse Levee assemblage presented in Chapter 9 is intended to discern technological nuances that can associate the fabric-impressed and net-impressed wares with specific cultural components. Unfortunately, the number of fabric-impressed and net-impressed sherds provisionally attributed to each identified component is too small to be of use in a distributional analysis.

A few general statements about horizontal ceramic distributions can be made, however. When a comparison is made between all unidentifiable ceramics and ceramics with fabric-impressed surfaces, it is evident that the unidentifiable wares have a slightly different horizontal distribution than do those with identifiable surface treatments (Figures 6.23 and 6.24). This suggests that the unidentifiable wares are not a related subgroup of fabric-impressed sherds deposited during a single occupation that have been eroded beyond recognition. Rather, this discrepancy suggests that more than one Woodland component is present. The detailed technological analysis presented in Chapter 9 suggests that at least three Woodland components exist, representing Early, Middle, and Late Woodland occupations.

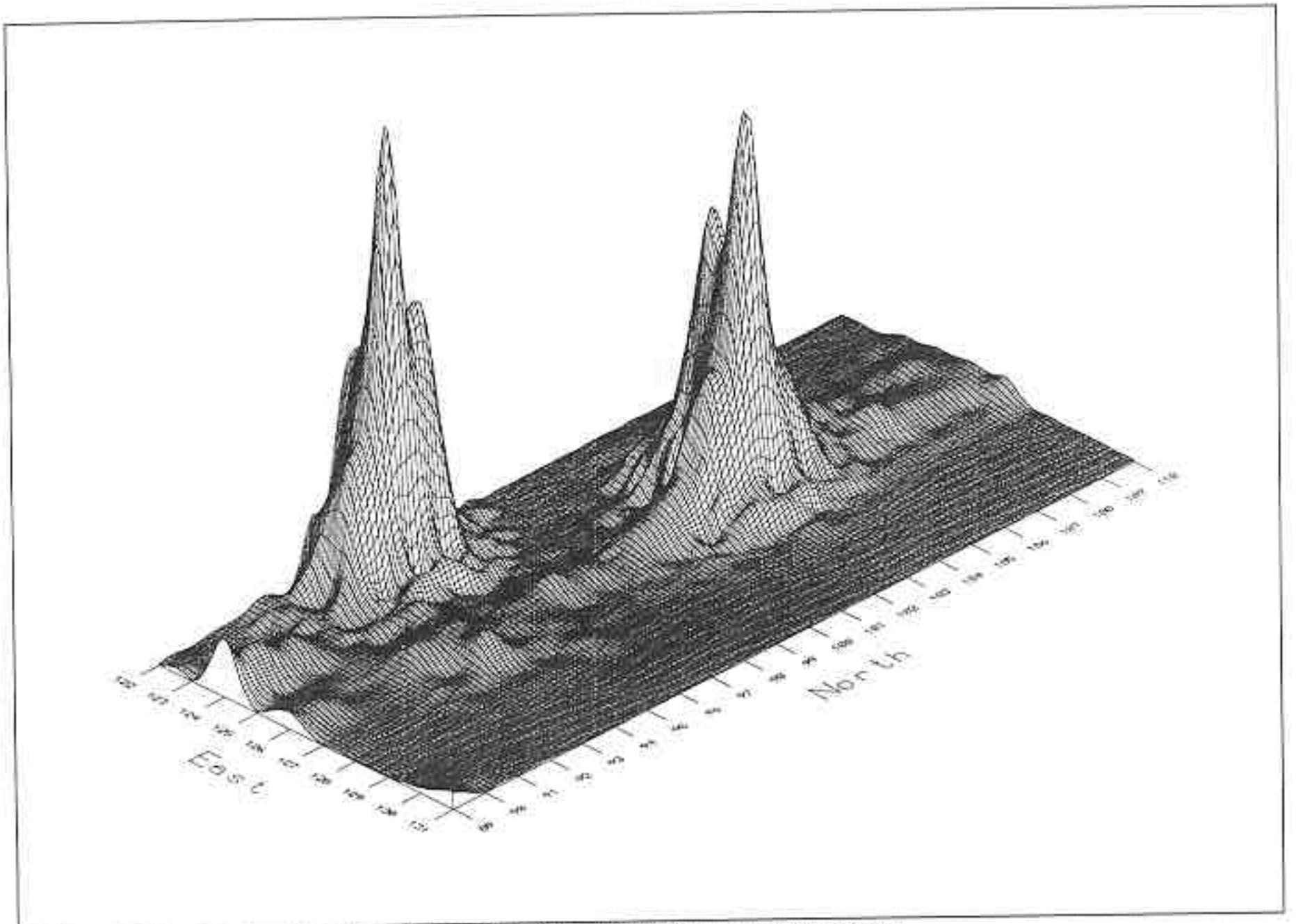


Figure 6.21. Three-Dimensional Distribution Plot of Debitage in the Late Archaic Levels at Neuse Levee.

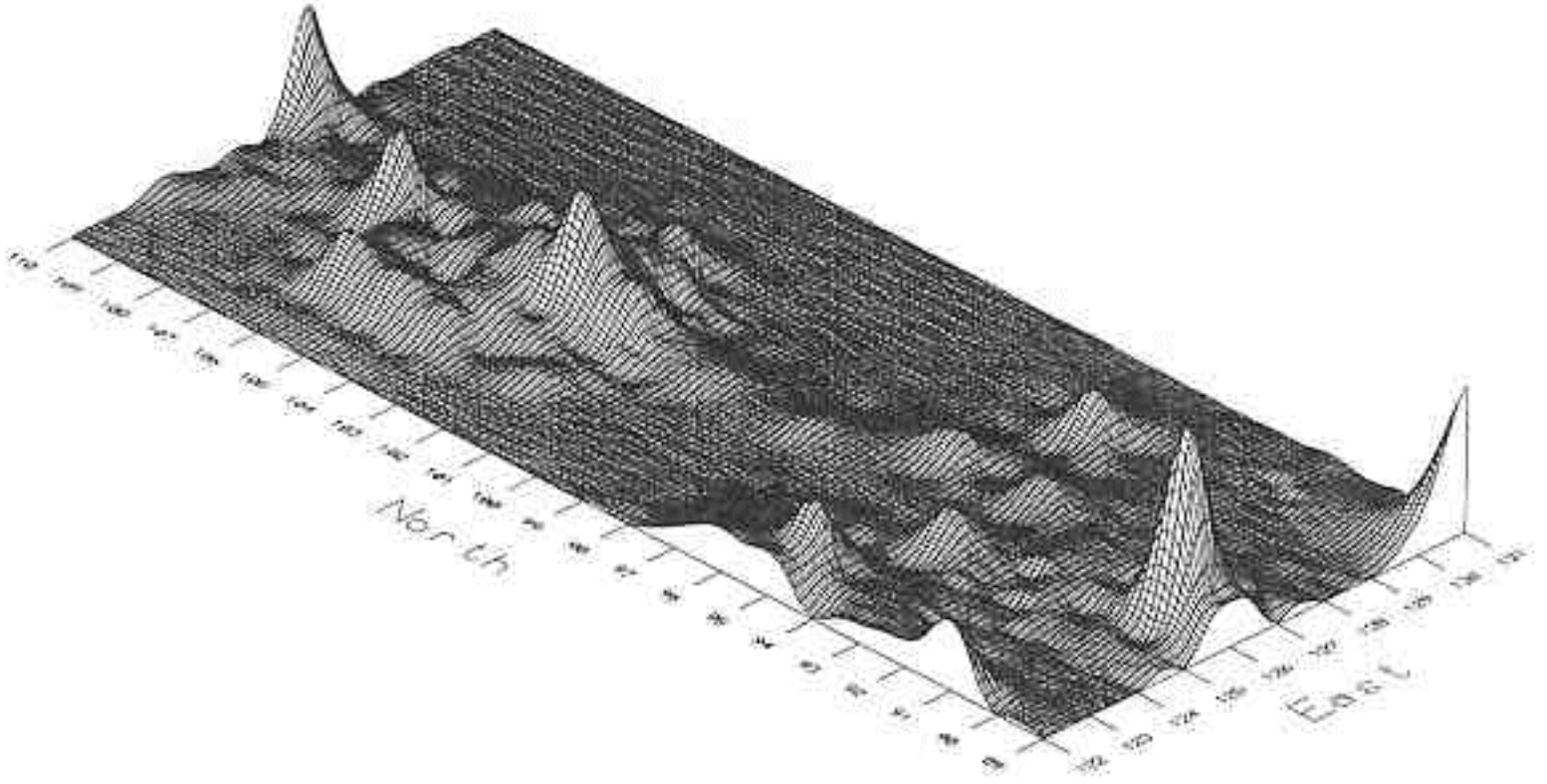


Figure 6.22. Three-Dimensional Distribution Plot of All Analyzed Ceramics at Neuse Levee.

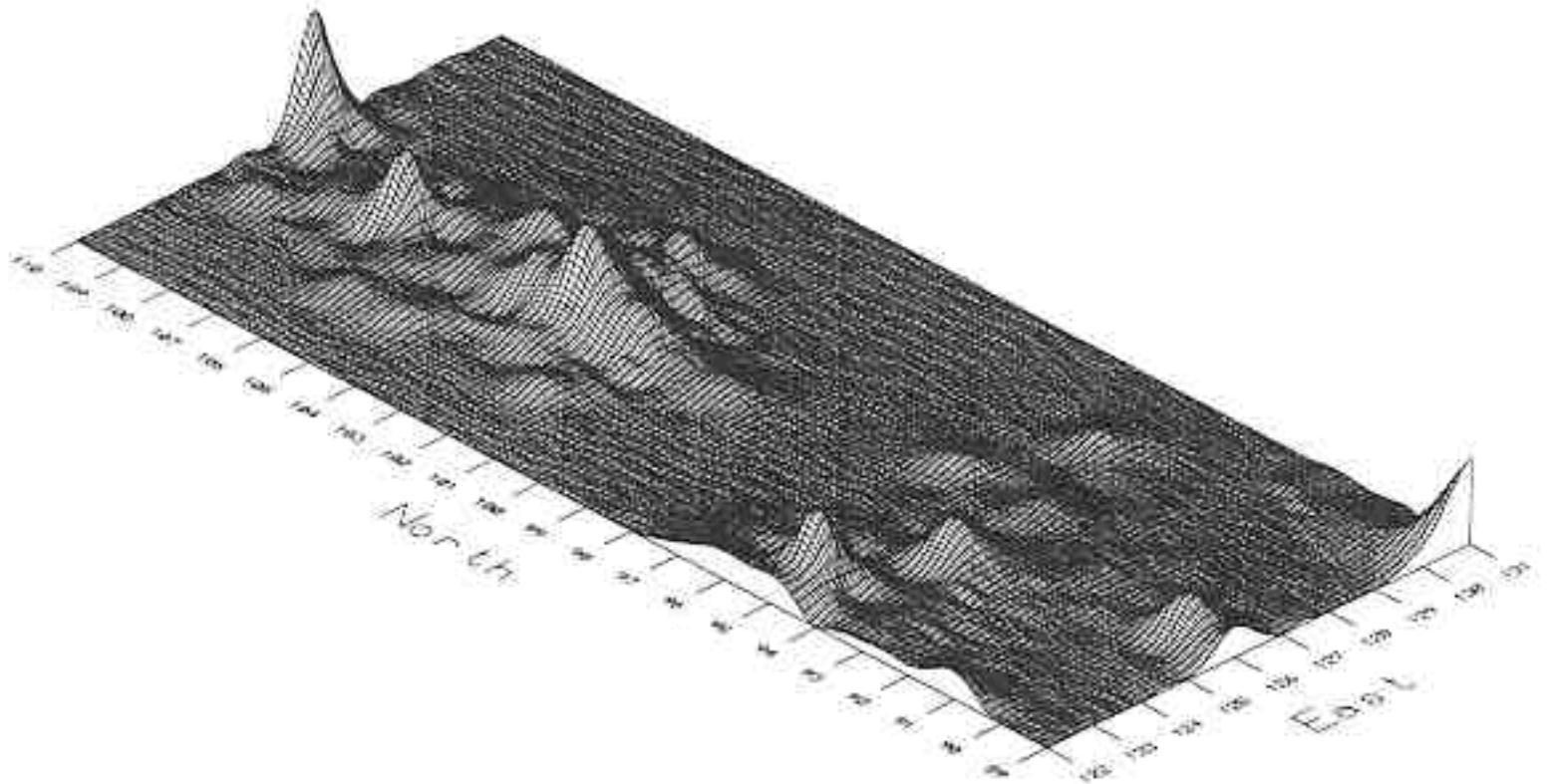


Figure 6.23. Three-Dimensional Distribution Plot of Fabric Impressed Sherds at Neuse Levee.

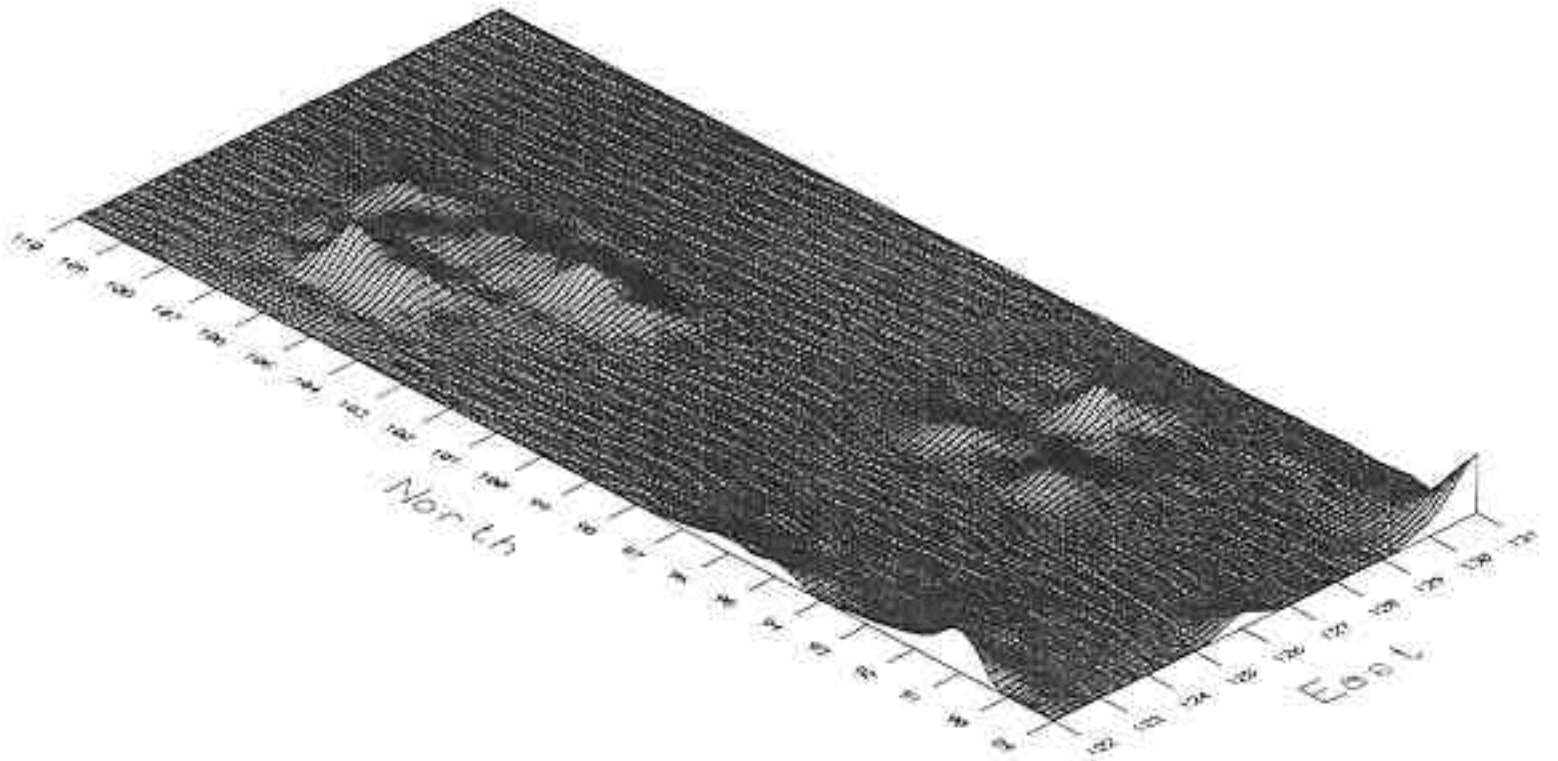


Figure 6.24. Three-Dimensional Distribution Plot of Sherds with Unidentifiable Surface Treatments at Nesse Levee.

Vertical Artifact Distributions

The lithic and ceramic data about vertical artifact distributions indicate that there are two primary cultural zones within the stratigraphic profile. The bimodal signal in the frequency distribution of lithics by depth is one indicator of this situation (Figure 6.25). It illustrates that the first mode (in LU 3), which is rather weak, begins at the 10–20-cm level, peaks at the 21–30-cm level, and steadily declines until it reaches its nadir 41–50 cm below the surface. The second mode (in LU 2) shows a dramatic increase in lithic artifacts at 61–70 cm below the surface; a peak is evident at the 81–90 cm level, and a dramatic decline occurs between 91 and 100 cm below the surface. The 51–60-cm level is probably a transition zone likely containing mostly artifacts associated with the lower levels.

Diagnostic evidence, when viewed by excavation level, indicates that the upper cultural zone (Zone I; 10–50 cm below the surface) contains archaeological material deposited during the Early, Middle, and Late Woodland periods. All diagnostic lithics attributable to the Woodland period are confined to this zone, and the Late Woodland Small Triangulars occur throughout its profile (Figure 6.26). Early and Middle Woodland hafted bifaces are confined to the 10–30 cm levels. This situation suggests that Early, Middle, and Late Woodland material has been amalgamated into a single assemblage, and that they cannot be vertically isolated from each other.

Vertical ceramic distributions also indicate that the assemblage from Zone I is distinctly Woodland in origin (Figure 6.27). It also illustrates that there is a fundamental difference between Zone I and the lower cultural zone (Zone II) because, with the exception of four very small sherds that have likely been forced down the soil column by natural processes, the entire ceramic assemblage is limited to Zone I.

The difference is not only accentuated by a correlation between the lack of ceramics and a dramatic increase in lithic artifacts, but also in terms of diagnostic lithic distributions. All diagnostic lithics in Zone II are Savannah River hafted bifaces, which are hallmarks of the Late Archaic period (see Figure 6.26).

The highest artifact concentrations in Zone II occur on the surface of the Bt, as does the highest incidence of two distinctive tool types: bihafted scrapers and hafted perforators. Also, all five cultural features were first encountered at the base of the Bw horizon, or in the Bt. It follows that this initial occupation of Neuse Levee was more intensive than any of the subsequent prehistoric visits. The nature of that occupation will be discussed later in this chapter; however, its Late Archaic date is secure. Four Savannah River hafted bifaces were discovered on the surface of the Bt, and four radiocarbon dates on charcoal recovered from the Bw/Bt interface all dated to between 3700 and 3860 radiocarbon years ago. This evidence firmly places this assemblage within the Late Archaic period.

The thickness of the lower cultural zone and the presence of Savannah River hafted bifaces further up in the profile (61–70 cm below the surface) indicate that at least one additional Late Archaic occupation occurred after the initial visit. Based on the diminished number of tools and debitage in that level, it is suspected that the subsequent Late Archaic occupation(s) was/were less intensive and probably of shorter duration.

With final regard to the Late Archaic assemblage, one fragmentary Savannah River hafted biface was discovered in Zone 1 at the 21–30 cm level. It is likely that this specimen was found or inadvertently removed (dug up?) from its original provenience during one of the Woodland occupations. This statement is based on the clear vertical separation between that specimen and the rest of the Late Archaic diagnostic inventory (see Figure 6.26).

Based on the analysis of vertical artifact distributions, the following assertions are made. Two distinct cultural zones are present in the stratigraphic profile of Neuse Levee. Zone I occurs between 10 and 50 cm below the surface, and it contains an amalgamated assemblage of Early, Middle, and Late Woodland archaeological material. Zone II is situated between 51 and 100 cm below the surface. It contains a Late

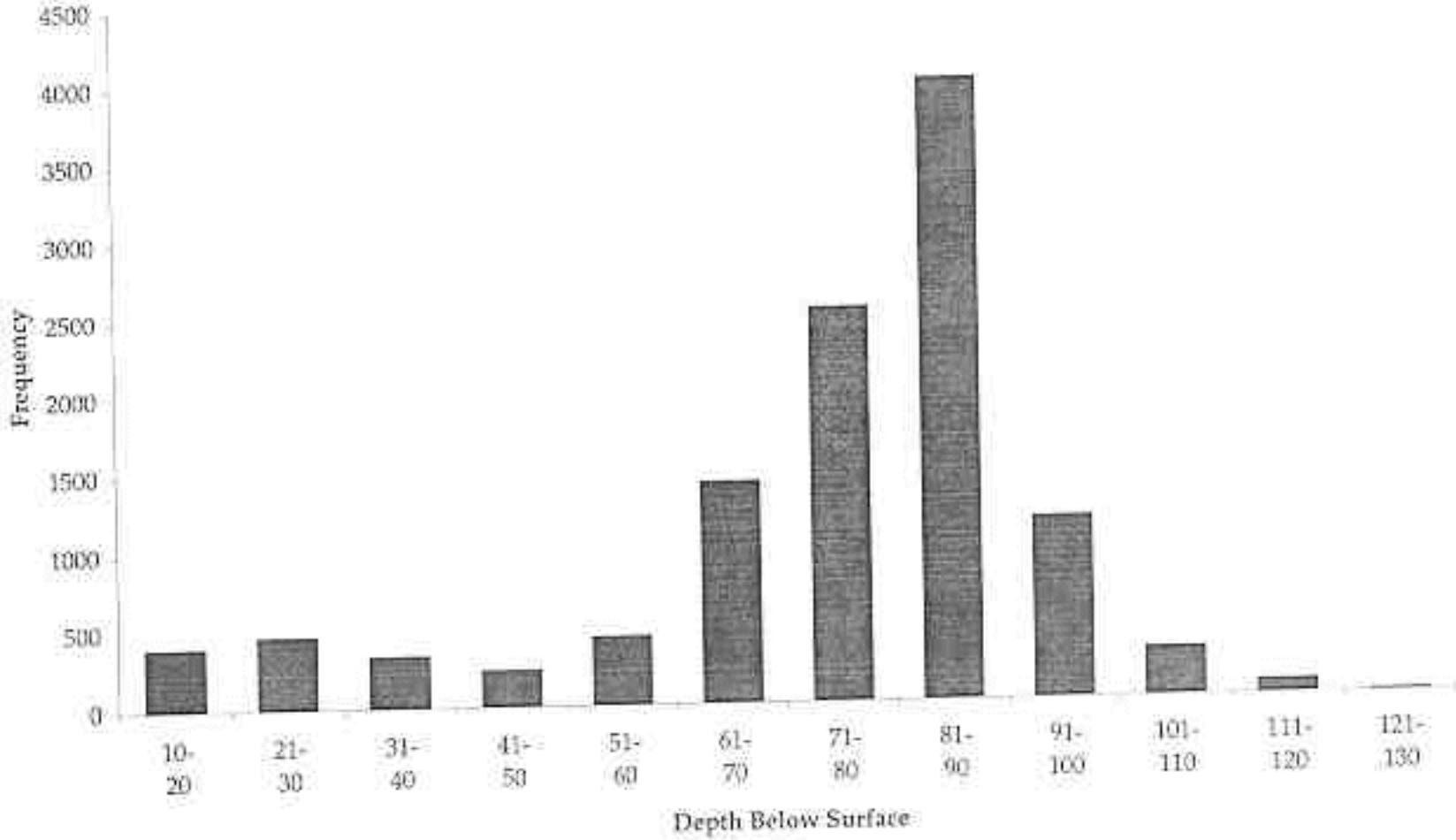


Figure 6.25. Lithic Artifact Frequencies by 10 cm Excavation Level at Nesse Levee.

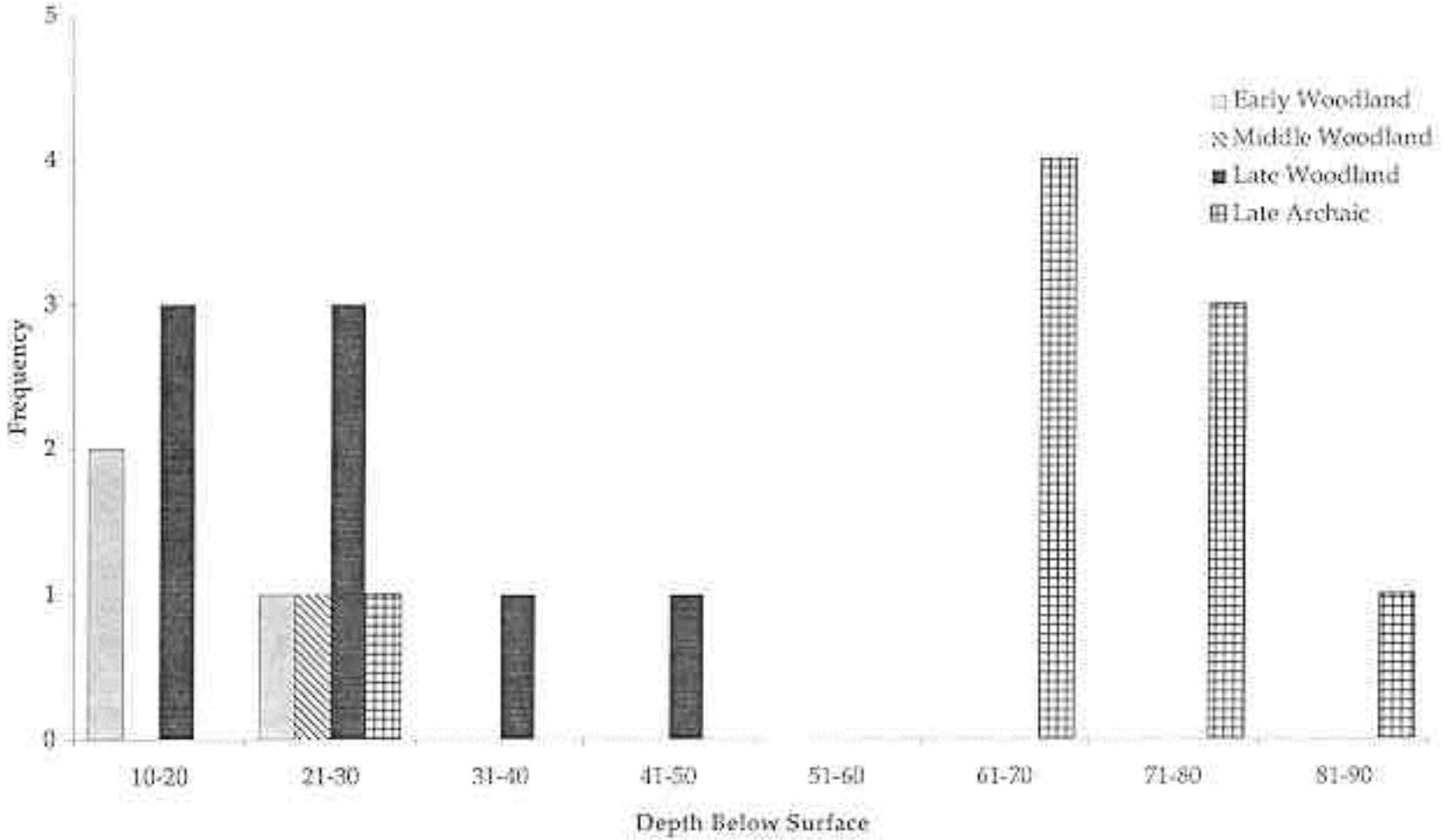


Figure 6.26. Diagnostic Lithic Frequencies by 10 cm Excavation Level at Neuse Levee.

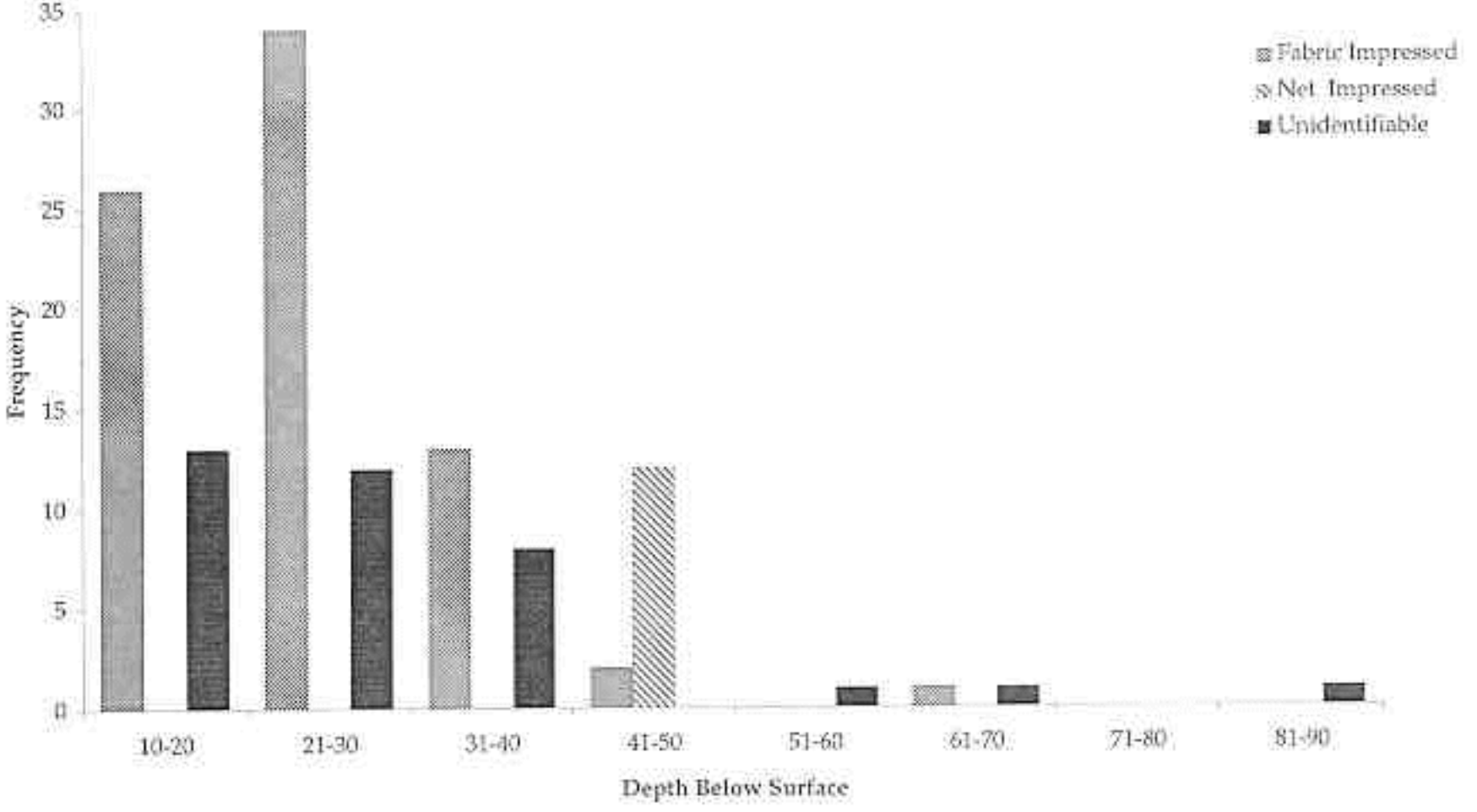


Figure 6.27. Ceramic Frequencies by 10 cm Excavation Level at Neuse Levee.

Archaic assemblage that was probably deposited during at least two occupational episodes. The initial occupation was the most intensive, and the occupation floor at that time was the surface of the Bt horizon. One or more subsequent Late Archaic visits occurred, but were probably much less intensive and shorter in duration.

SITE FUNCTION AND STRUCTURE

This section incorporates the technological and distributional data into a discussion of site function and structure for each of the two cultural components identified at Neuse Levee.

The Woodland Component

Diagnostic lithic and ceramic evidence indicates that at least one visit to Neuse Levee occurred during each of the Early, Middle, and Late Woodland periods. Unfortunately, the lack of vertical and horizontal isolation within the Woodland stratigraphic zone (Zone I) precludes us from presenting a detailed analysis of site structure and function for individual occupations. It is possible, however, to make a few general statements concerning Woodland period site use.

The Woodland lithic assemblage is much smaller and less diverse than the Late Archaic lithic inventory. A comparison of the Zone I and Zone II (Late Archaic component) assemblages clearly demonstrates that the site was used much more intensively during the Late Archaic than it was during the Woodland, at least in terms of activities related to lithic reduction and lithic tool utilization (Tables 6.11 and 6.12).

Chipped stone tools in the Woodland inventory include expedient-disposable (e.g., utilized flakes), formal-disposable (e.g., bifaces), and formal-curated (e.g., hafted bifaces) varieties. Although these tools represent a wide range of possible functions, their limited numbers suggest that they were used to accomplish small-scale and short-term tasks. The lithic tool assemblage is limited to 28 tools. If there were only three Woodland occupations, one during each of the three subperiods, this translates to an average deposition of only 9.3 tools per episode. A majority of the tools are hafted bifaces (PP/Ks) or preforms (60.7%; n=17), however. If those specimens are removed from consideration, the overall Woodland chipped stone tool assemblage decreases to 2.7 tools per occupation (n=11). Ten of those 11 tools are utilized flakes, and one is a biface.

A similar situation occurs in terms of artifacts related to lithic reduction. Assuming that there were three Woodland occupations, on average there was approximately 400 pieces of debitage and 1.7 cores produced during each visit.

Obviously, these averages do not reflect actual conditions, and it is possible, though not likely, that most of the debitage and nondiagnostic tools were used and deposited during one of the Woodland habitations. This exercise was meant to emphasize the limited nature of the lithic assemblage in Zone I. Even if one occupation was responsible for most of the nondiagnostic artifacts, the inventory is not substantial enough to indicate that relatively long-term and/or labor-intensive activities occurred during that visit.

In terms of ceramics, the assemblage is rather meager. Including sherdlets less than 2 cm in diameter, only 199 vessel fragments were discovered during data recovery. Excavations covered 59 m^2, and at least three occupations are associated with some degree of ceramic use. This converts to 3.8 sherds/m^2 for the entire Woodland assemblage, and 1.3 sherds/m^2 for each of the three identified ceramic components. If volume is added to the equation, the distribution equates to 2.6 sherds m^3. Given that most of the ceramics are very small fragments, it is very likely that only a few vessels were broken during each of the Woodland visits.

Table 6.11. Lithic Artifacts Associated with the Woodland Component at Neuse Levee.

	Rhyolite	Quartz	Quartzite	Chert	Gneiss	Sandstone
Hafted Bifaces	12	3		1		
Preforms	1					
Bifaces	1					
Utilized Flakes	6	2		2		
Hammerstone/Batt.ered Cobbles		2	2			
Celt Flakes					1	
Cores		4	1			
Tested Cobbles			1			
Debitage	851	83	3	320		
FCR		29	5		1	1
Unaltered Cobbles	47	27	4		43	1
Subtotal	*918*	*150*	*16*	323	*45*	2
TOTAL						1,454

* Does not include the self-evident raw material for soapstone (n=4), graphite (n=6), and ochre (n=1).

Table 6.12. Lithic Artifacts Associated with the Late Archaic Component at Neuse Levee.

	Rhyolite	Quartz	Quartzite	Chert	Jasper	Gneiss	Sandstone
Hafted Bifaces	18						
Hafted Drills	1						
Hafted Scrapers	1						
Hafted Perforators	7						
Bihafted Scrapers	21						
Preforms	7						
Bifaces	10						
Utilized Flakes	16	2	1				
Manos						1	
Hammerstone/Batt.ered Cobbles	1	4	1				1
Cores	11	2	2				
Tested Cobbles	1						
Debitage	8,360	154	42	24	1		1
FCR	3	252	26			2	2
Unaltered Cobbles	376	119	5			97	1
Subtotal	8,833	533	77	24	1	100	5
TOTAL							9,573

* Does not include the self-evident raw material for soapstone (n=3), mica (n=2), and ochre (n=3).

The paucity of ceramics, absence of cultural features, and lack of food processing implements such as manos, metates, pestles, and nutting stones, suggest that very little domestic activity took place at Neuse Levee during any of the Woodland occupations. Further, the limited lithic inventory indicates that labor-intensive activities—large-scale food acquisition, food processing, lithic tool production, and lithic tool maintenance, for example—were not conducted either.

It is likely that the levee provided a relatively dry location close to navigable water that served as a serviceable short-term camp. It was possibly used as a waystation while in the midst of accomplishing particular economic, political, or social tasks.

The Late Archaic Component

The Late Archaic component is contained within Zone II, which begins at a depth of 51 cm and extends to the surficial layer of the Bt horizon. The surface of the Bt occurs between 78 and 83 cm below the surface on the levee crest, and as deep as 110 cm near the base of the old river bank (see Figure 6.20). Most of the Late Archaic material originated on, or very near, the Bt surface (see Figure 6.25).

That surface was probably exposed during the initial visit to Neuse Levee, and it appears to have been an occupation floor at that time. All of the cultural features occurred at, or originated in, the Bt. In addition, many of the Late Archaic tools were discovered lying horizontal directly on the surface of that soil horizon (see Figure 6.6).

A comparison of diagnostic artifact frequencies with overall frequencies suggests that at least two Late Archaic components may be present. The 61–70–cm level contains the highest number of Savannah River hafted bifaces, even though that level contained significantly fewer artifacts overall than did subsequent excavation levels (see Figure 6.26). Also, hammerstones/battered cobbles and cores are absent from the 51–70-cm levels, while they are plentiful in the sub-70-cm levels (Tables 6.13 and 6.14). This suggests that the material deposited in the upper levels of Zone II may represent different, and perhaps less focused, activities.

This evidence notwithstanding, the overall distribution signal of vertical artifact frequencies for Zone II could be created by a single occupation that was focused at the 81–90-cm level, which is the average depth of the Bt surface (see Figure 6.25). This would place the majority of the Late Archaic material within 20 cm of the occupation surface. The vertical distribution of hafted perforators and bihafted scrapers is additional evidence that a single occupation may be responsible for the Late Archaic component.

Most of these objects were found in the lower levels, many of them directly on the Bt surface, but they occur in the upper portion of Zone II as well (Figure 6.6; see Tables 6.13 and 6.14). The unique nature of these items, in terms of their morphology and suspected function, strongly suggests that all examples of these tool classes were in use at the same time (see below).

Taking all of the evidence into account, it appears that the vast majority of the cultural material in Zone II is attributable to a single Late Archaic occupation. The site may have been revisited one or more times later in the period, at which time a few Savannah River hafted bifaces and a minor amount of other debris was deposited. The character of the overall assemblage, however, is assumed to reflect the activities that occurred during the initial habitation. The following discussion is based on that assumption.

As mentioned above, the surface of the Bt horizon appears to have been an occupation floor during the first prehistoric visit to the site. The river was much closer to the site at that time, and the Late Archaic occupants made use of the levee crest as well as the river bank.

Table 6.13. Lithic Artifacts Associated with the Lower Late Archaic Levels (71+ cm) at Neuse Levee.

	Rhyolite	Quartz	Quartzite	Chert	Gneiss	Sandstone
Hafted Bifaces	12					
Hafted Drills	1					
Hafted Scrapers	1					
Hafted Perforators	6					
Bihafted Scrapers	15					
Preforms	4					
Bifaces	5					
Utilized Flakes	13	2	1			
Manos					1	
Hammerstone/Battered Cobbles	1	4	1			1
Cores	11	2	2			
Tested Cobbles	1					
Debitage	7,237	104	38	13		1
FCR	3	175	23		1	2
Unaltered Cobbles	292	73	5		79	1
Subtotal	*7,602*	*360*	*70*	*13*	*81*	*5*
TOTAL						8,131

* Does not include the self-evident raw material for soapstone (n=3) and ochre (n=3).

Table 6.14. Lithic Artifacts Associated with the Upper Late Archaic Levels (51-70 cm) atNeuse Levee.

	Rhyolite	Quartz	Quartzite	Chert	Jasper	Gneiss
Hafted Bifaces	6					
Hafted Perforators	1					
Bihafted Scrapers	6					
Preforms	3					
Bifaces	5					
Utilized Flakes	3					
Debitage	1,123	50	4	11	1	
FCR		77	3			1
Unaltered Cobbles	84	46				18
Subtotal	1,231	173	7	11	1	19
TOTAL						

* Does not include the self-evident raw material for mica (n=2), and ochre (n=1).

A dense concentration of large rhyolite debitage was discovered in the southern portion of the site on the ancient bank; another dense cluster of large flakes was found on the levee crest north of the first concentration (see Figure 6.21). These areas were used for the primary reduction of river cobbles that were almost certainly obtained from the river bed and bank. Many of the flakes can be refitted, and it appears that the Late Archaic debitage originated from a relatively small number of large cobbles (Figure 6.28).

Other than the lithic reduction stations, specialized activity areas cannot be discerned. Lithic tools were scattered throughout the levee without apparent pattern or association (see Figure 6.6). Two of the five cultural features, Features 5 and 6, were associated with the lithic reduction stations. The remaining three features are spread across the levee. Features 2 and 3 were small clusters of FCR and unaltered cobbles, and Feature 4 was a small pit that lack cultural and subsistence-related organic material. The origin and function of these features is unknown.

No hearths were encountered, and the FCR assemblage is relatively small and scattered. There is also a paucity of artifacts associated with food processing, such as pestles, nutting stones, and metates. The artifact classified as a mano is possibly associated with food grinding, but it is also possible that this item was used for grinding and smoothing in some other capacity (Figure 6.29). This lack of domestic debris suggests that the purpose of the site was other than extended occupation for living purposes.

The technological data indicate that Neuse Levee may have been a Late Archaic work area that involved specialized labor-intensive activities. Two unique tool types are present in significant numbers. The first is a bifacial scraper (n=21) that has been worked on opposite ends to create a hafting element on each pole; they are referred to as bihafted scrapers (Figure 6.30). Many specimens are complete, the others are fragments that are inferred to belong to this class because of their technological and morphological similarities to the complete examples. All 21 specimens are rhyolite.

These tools are roughed-out bifaces that exhibit tapered hafting elements; the base of the hafting element is straight or convex. Lengths range from 4 to 8 cm, and they are between 2 and 3.5 cm wide. Sizes grade from small to large; there are no specific size classes, however. Use wear is evident on most specimens in the form of step fractures that are indicative of especially heavy scraping. Some specimens exhibit use-wear on one face of one edge. Use wear on others occurs on one face of both edges. In those cases, it is always on the same side of the tool.

Bihafted scrapers appear to have been used in a fashion similar to drawknives. It is thought that handles were placed at both poles, and the implement was drawn toward the user. It is suggested that they were used to shape wood, and/or to remove bark.

The second type of unique tool associated with the Late Archaic component is a hafted perforator (n=7). These objects exhibit a hafting element and a very sharp tip (Figure 6.31). They are ovate in plan, and superficially resemble Morrow Mountain points. Five examples found at the site are bifacially retouched flakes that retain some of their flake morphology. The other two are bifaces. All of the specimens are manufactured from rhyolite.

The Neuse Levee hafted perforators are 3–6.5 cm in length, and they range from 2.5 to 3.5 cm in width. They exhibit a distinctively crafted pointed tip that attests to their intended function as a perforator. The hafting elements are tapered, and the base is convex.

One hafted drill is included in the Late Archaic inventory. It appears to be fashioned from a Savannah River PP/K, as is the only hafted (non-bihafted) scraper associated with that assemblage (Figure 6.4j, k).

Many of the utilized flakes are exceptionally large and exhibit deep step fractures on at least one edge (Figure 6.32). Some of these objects are unspecialized flakes, while others are blades. These items appear to also have been used in a heavy-duty capacity, probably for woodworking purposes.

Figure 6.28. View of Reconstructed Quartzite Cobble from Neuse Levee.

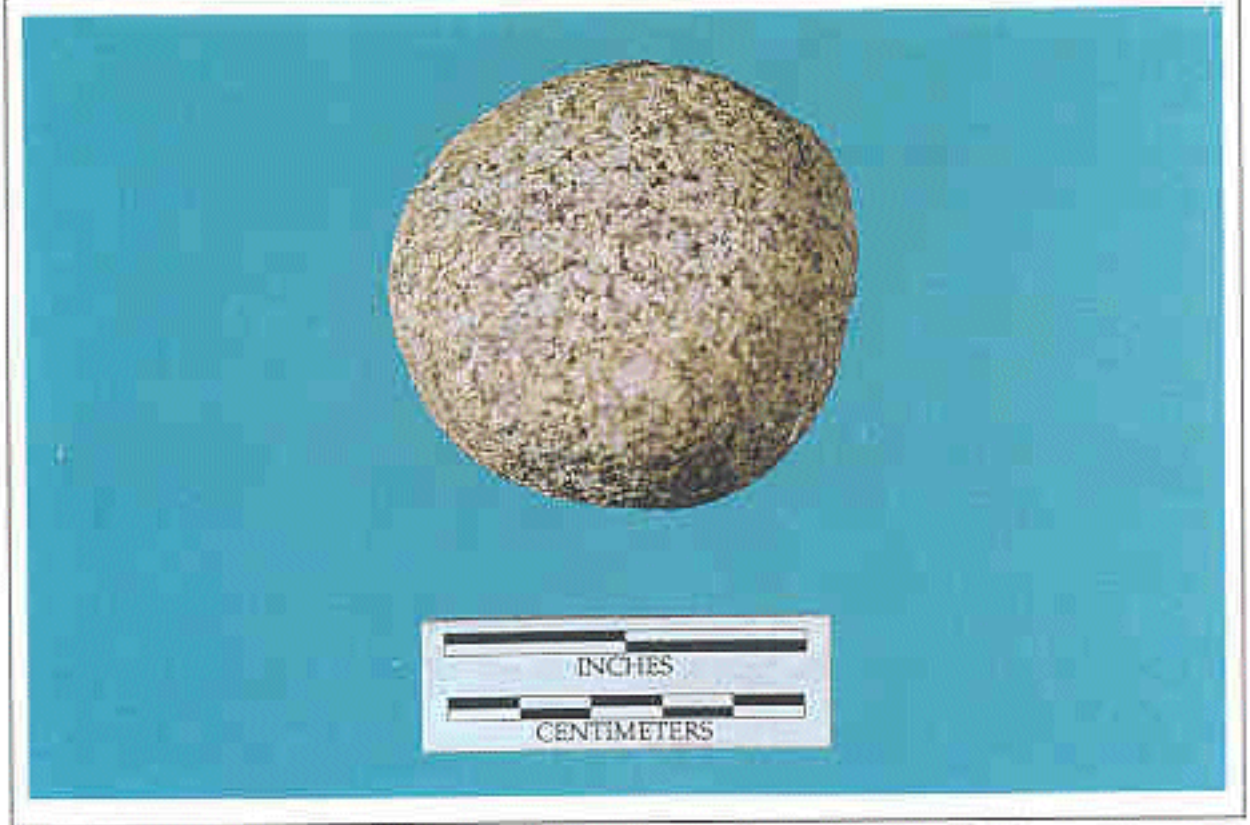


Figure 6.29. Mano Recovered from Neuse Levee during Data Recovery Investigations.

Figure 6.30. Bifacial Scrapers Recovered from Neuse Levee during Data Recovery Investigations.

Figure 6.31. Hafted Perforators Recovered from Neuse Levee during Data Recovery Investigations.

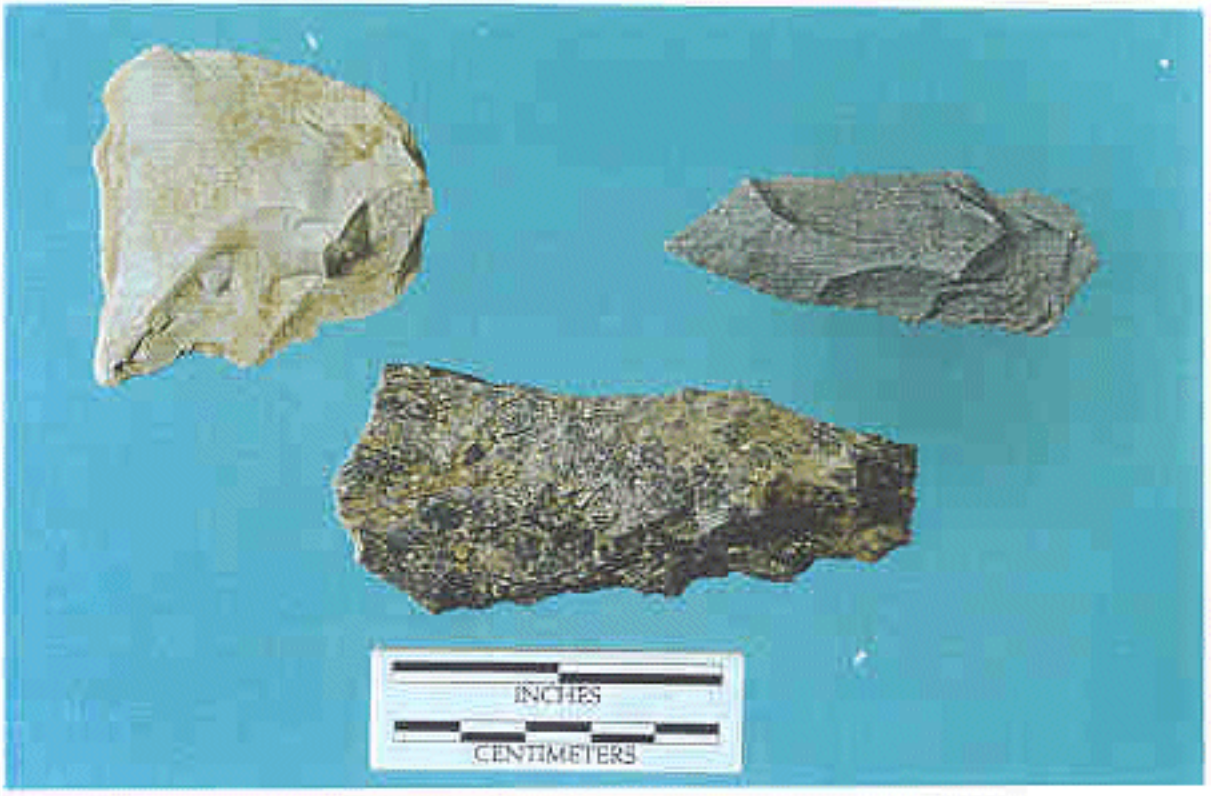


Figure 6.32. Utilized Flakes Recovered from Neuse Levee during Data Recovery Investigations.

Ten non-hafted bifaces, all of them rhyolite, are present (Figure 6.33). Some examples are "hump-backed" and retain a dorsal ridge (Figure 6.33e). Others appear to be medial fragments of lanceolate forms, while one specimen is a broken bipointed example that is similar in form to the bihafted scrapers (Figure 6.33b–d, a). There is no evidence that the distal edge has been prepared for hafting, however.

Finally, seven rhyolite Savannah River preforms were recovered during data recovery. That assemblage consists of proximal and distal sections of both early- and late-stage preforms (Figure 6.34). All of the Savannah River preforms and PPKs are large specimens that probably served as knives, and perhaps prying tools, rather than spear points. Evidence that large Savannah River hafted bifaces functioned in this capacity has been reported by Elliott et al. (1994), Stanyard (1997), and others.

Based on the types and numbers of tools present, as well as the lack of evidence for domestic activity, it is suggested that the Late Archaic component is primarily associated with an intensive short-term episode that involved some degree of woodworking and, perhaps, other labor-intensive activities. The site is thought to have functioned as a work area, perhaps to gather construction material for canoe-building or repair. The presence of perforators adds some degree of support for this contention, as these tools were probably used to pierce hide and/or bark. This would be necessary if hide or bark canoes were being built or repaired.

It is also possible that wood was being gathered and prepared for use in some other type of construction occurring elsewhere, and the perforators were used to satisfy some unknown need. The lack of large wood-cutting implements such as celts and axes is not problematic because these valuable objects would have been removed when the work was complete.

Whatever activity was of primary focus, it is evident that most of the tools deposited at Neuse Levee during that episode were produced, used, and discarded at the site. This contention is based on two factors. The first is that some of the tools recovered are broken. The second concerns raw material. The colors and textures of the rhyolite used to make the tools are identical to the colors and textures of the cores and debitage (see Chapter 10).

Finally, four radiocarbon dates were obtained on charcoal recovered from the Bt/Bw interface and the surficial layer of the Bt (Figure 6.35; see Chapter 11). The most recent date is 3700±60 B.P., and the earliest is 3840±90 B.P. The calibrated dates on the samples indicate that the site was occupied sometime around 2200 B.C. As discussed above and in Chapter 11, the tight date cluster had considerable overlap, adding further support to the argument that a single occupation is responsible for the majority of the Late Archaic material.

Figure 6.33. Bifaces Recovered from Neuse Levee during Data Recovery Investigations.

Figure 6.34. Savannah River Preforms Recovered from Neuse Levee during Data Recovery Investigations.

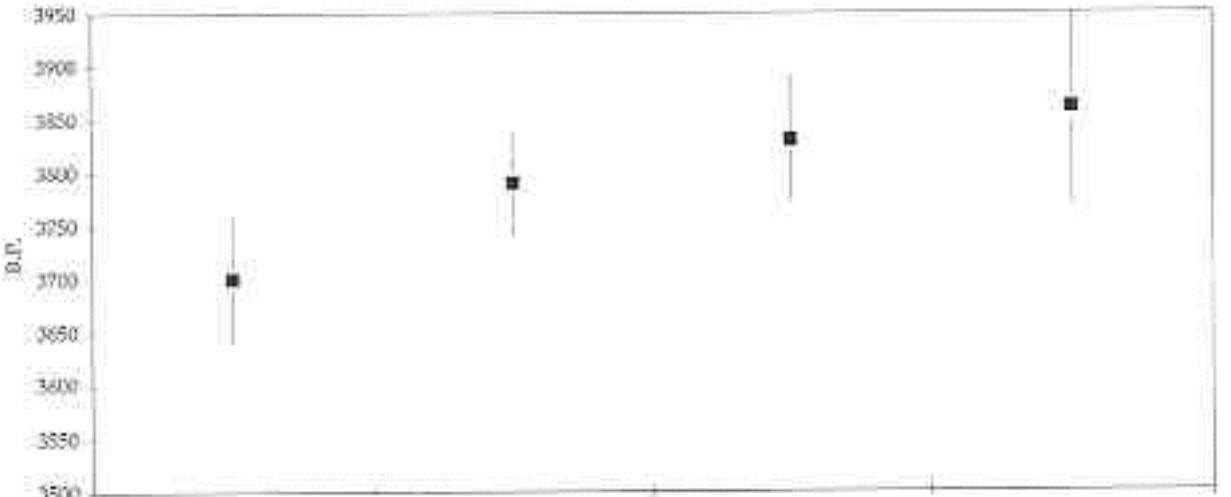


Figure 6.35. Radiocarbon Dates Obtained on Charcoal Recovered from the Late Archaic Occupation Zone (Zone II).

7. ETHNOBOTANY (Andrea B. Shea, M.A.)

INTRODUCTION

Botanical samples were examined from two contexts. The first was flotation samples recovered from four features and processed through a flotation system. The fractions were examined for charred ethnobotanical remains. A second set of samples was drawn from a level context during excavation and, after species identification, was submitted for radiocarbon dating. All of the samples were radiocarbon dated to the same time. A small assemblage was identified containing very low frequencies of charred wood and nut fragments, but no plant seeds or animal remains were found.

METHODS

Flotation samples were processed through a flotation system that collected the heavy and light fractions in 1/16-inch (0.0625-inch) screens. Both fractions were allowed to air-dry, then stored in acid-free bags.

The heavy fraction portions greater than 2 mm were examined through a magnalight for charred seeds or nut fragments. The light fractions were sieved through 1-mm and 2-mm screens. All charred plant remains were removed from the entire light fraction (using magnalight and microscope). Charred wood fragments were taken only from the portion of the light fraction greater than 2 mm.

Seed and nut identifications utilized the ethnobotanical collection held by TRC and reference materials (Martin and Barkley 1961; Montgomery 1978).

RESULTS

Flotation Samples

Seven samples from Features 3, 4 (4 subsamples), 5, and 6 were processed through the flotation system. Table 7.1 details the remains identified.

Sixty-three fragments of charred wood, bark, nuts, and nut husks were found in the four features. In addition to oak (n=4), pine (n=33), and porous-diffuse wood (n=2), identifications included bark (n=15), hickory nut (n=8), and hickory nut husk (n=1).

The limited results of the flotation provide some insights into the features. If the artifacts are divided into fuel and food, pine is consistently present across the features (Table 7.2). Oak appears only in Features 4 and 5 in Block A. Bark is confined to various samples from Feature 4. Hickory nuts and husks also appear in all of the features except Feature 6. The persistent mix of fuel and food would seem to suggest some consistency in the utility of the features. Additional suggestions about the character of the features emerge as the ethnobotanical evidence is combined with the lithic findings (see summary).

Botanical/Radiocarbon Samples

Four carbon samples were collected (Table 7.3). No samples were taken from features, as no feature material was of sufficient size for dating. The samples were collected by hand from general level